GA-7VRX/GA-7VRXP

AMD Socket A Processor Motherboard

USER'S MANUAL

AMD Athlon™/ Athlon™XP / Duron™Socket A Processor Motherboard

Rev. 1101

12ME-7VRX-1101

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Item Checklist

- ☑ The GA-7VRX/GA-7VRXP motherboard
- ☑ IDE cable x 1/ Floppy cable x 1(7VRX)
- ☑ IDE cable x 3/ Floppy cable x 1(7VRXP)
- ☑ CD for motherboard driver & utility
- ☑ GA-7VRX/GA-7VRXP user's manual
- ☑ USB Cable (only for GA-7VRXP)

WARNING!



Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Installing the motherboard to the chassis…

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

Chapter 1 Introduction

Summary of Features

Form Factor	• 30.5cm x 23.5cm ATX size form factor, 4 layers PCB.
Motherboard	• GA-7VRX/GA-7VRXP Motherboard
CPU	• Socket A processor AMD Athlon™/Athlon™ XP/ Duron™ (K7) 128K L1 & 256K/64K L2 cache on die 200/266MHz FSB and DDR bus speeds • Supports 1.4GHz and faster
Chipset	• VIA KT333 Memory/AGP/PCI Controller (PAC) • VIA VT8233A(CE) Integrated Peripheral Controller (PSIPC)
Memory	• 3 184-pin DDR sockets • Supports DDR DRAM PC1600/PC2100/PC2700<Note 1> • Supports up to 3.0GB DDR (Max) • Supports only 2.5V DDR DIMM
I/O Control	• IT8705
Slots	• 1 AGP slot supports 4X/2X mode & AGP 2.0 Compliant • 5 PCI slots supports 33MHz & PCI 2.2 compliant
On-Board IDE	• 2 IDE controllers provides IDE HDD/CD-ROM (IDE1, IDE2) with PIO, Bus Master (Ultra DMA33/ATA66/ATA100/ATA133) operation modes. • IDE3 and IDE4 Compatible with RAID,Ultra ATA133/100, EIDE
On-Board Peripherals	• 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes. • 1 Parallel port supports Normal/EPP/ECP mode • 2 Serial port (COMA & COMB) • 4 x USB 2.0 by cable , 2 x USB 1.1 by cable and 2 x USB 1.1 onboard • 1 IrDA connector for IR

<Note 1> Because the quality of PC2700 module is varied, we don't recommend you to use 3pcs of PC2700 module at the same time.

"*" Only for GA-7VRXP.

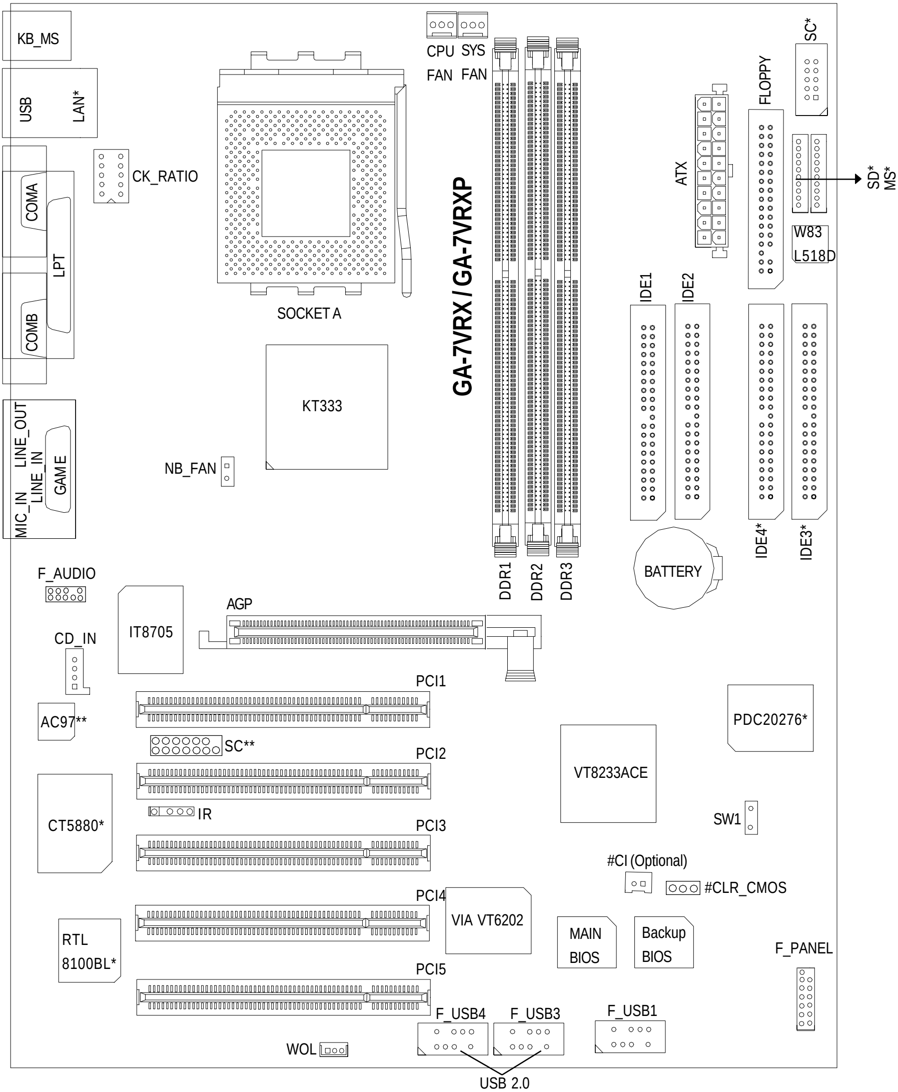
to be continued......

Hardware Monitor	•	CPU/System Fan Revolution detect
	•	CPU/System temperature detect
	•	System Voltage Detect
On-Board Sound	•	Creative CT5880 Sound Chipset*
	•	Sigmatel 9721T CODEC
	•	Line In/Line Out/Mic In/CD In/Game Port
On-Board RAID*	•	Onbard Promise PDC20276
	•	Supports data striping (RAID 0) or mirroring (RAID 1)
	•	Supports concurrent dual IDE controller operation
	•	Supports IDE bus master operation
	•	Displays status and error checking messages during boot-up
	•	Mirroring supports automatic background rebuilds
	•	Features LBA and Extended Interrupt 13 drive translation in controller onboard BIOS
On-Board LAN*	•	RealTek TRL8100BL
On-Board USB 2.0	•	VIA VT6202
On-Board MS,SD,SC*	•	Winbond SMART @I/O Chipset (Memory Stick , Security Digital and SC header)
PS/2 Connector	•	PS/2 Keyboard interface and PS/2 Mouse interace
BIOS	•	Licensed AMI BIOS, 2M bit flash ROM
	•	Supports Dual BIOS
	•	Supports Q-Flash
Additional Features	•	Wake on LAN (WOL)
	•	Supports @BIOS™
	•	Supports EasyTuneIII™

Please set the CPU host frequency in accordance with your processor's specifications. We don't recommend you to set the system bus frequency over the CPU's specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Chipsets,SDRAM,Cards….etc.

"*" Only for GA-7VRXP.

GA-7VRX/GA-7VRXP Motherboard Layout



"*" Only for GA-7VRXP. **"**" Only for GA-7VRX.**

"#" Only for GA-7VRX/GA-7VRXP PCB Ver.1.1 use.

Chapter 2 Hardware Installation Process

To set up your computer, you must complete the following setps:

Step 1- Set Dip Switch (CK_RATIO) and system Switch (SW1)

Step 2- Install the Central Processing Unit (CPU)

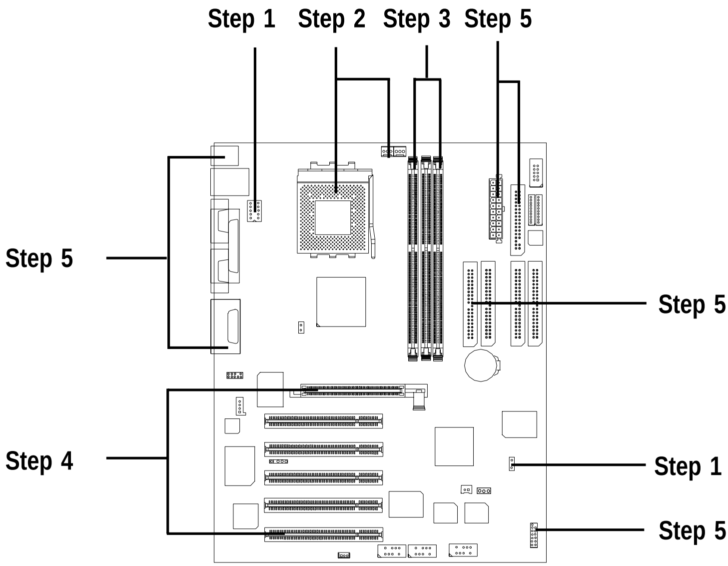
Step 3- Install memory modules

Step 4- Install expansion cards

Step 5- Connect ribbon cables, cabinet wires, and power supply

Step 6- Setup BIOS software

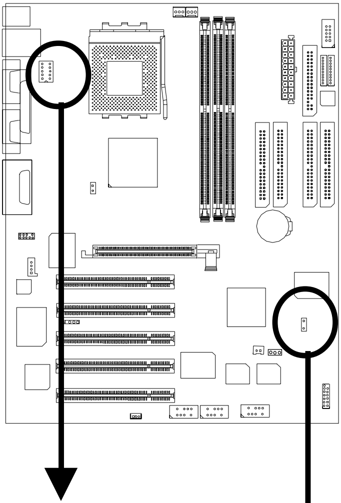
Step 7- Install supporting software tools



Step 1: Install the Central Processing Unit (CPU)

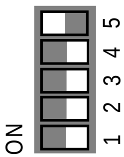
Step1-1: CPU Speed Setup

The clock ratio can be switched by CK_RATIO and refer to below table.



Default Setting : Auto

(X X X X O)



CK_RATIO

CLK_RATIO O: ON / X :OFF

RATIO	1	2	3	4	5
AUTO(Default)	X	X	X	X	O
5x	O	O	X	O	X
5.5x	X	O	X	O	X
6x	O	X	X	O	X
6.5x	X	X	X	O	X
7x	O	O	O	X	X
7.5x	X	O	O	X	X
8x	O	X	O	X	X
8.5x	X	X	O	X	X
9x	O	O	X	X	X
9.5x	X	O	X	X	X
10x	O	X	X	X	X
10.5x	X	X	X	X	X
11x	O	O	O	O	X
11.5x	X	O	O	O	X
12x	O	X	O	O	X
>=12.5x	X	X	O	O	X

O: ON / X :OFF

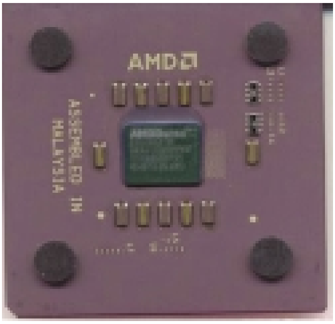


SW1

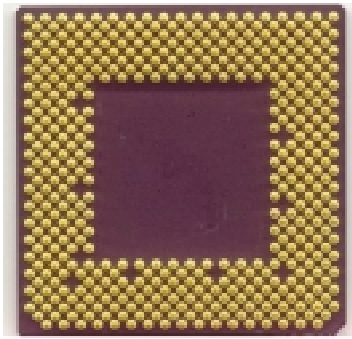
SW1	1:CPU CLOCK
1:ON	100MHz (Default)
1:OFF	133MHz

The system bus frequency can be switched at 100/133MHz by adjusting system switch (SW1). (The internal frequency depend on CPU.)

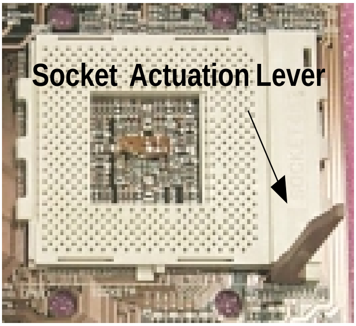
Step1-2: CPU Installation



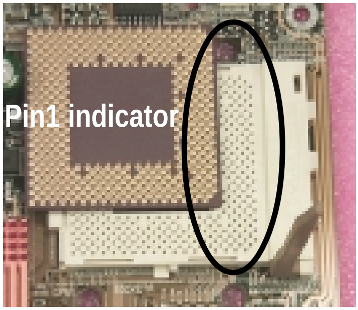
CPU Top View



CPU Bottom View



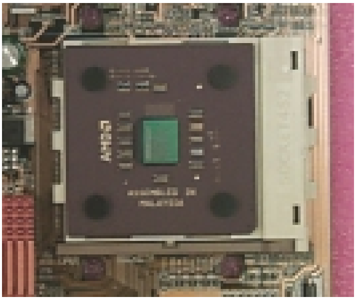
1. Pull up the CPU socket lever and up to 90-degree angle.



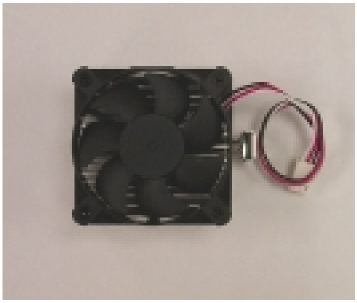
2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

- **Please make sure the CPU type is supported by the motherboard.**
- **If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.**

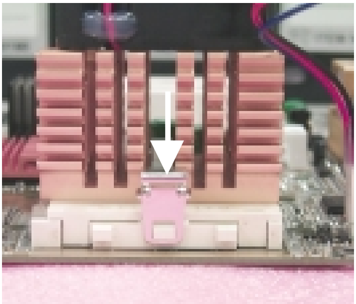
Step1-3:CPU Heat Sink Installation



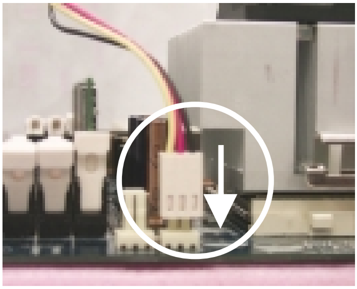
1. Press down the CPU socket lever and finish CPU installation.



2. Use qualified fan approved by AMD.



3. Fasten the heatsink supporting-base onto the CPU socket on the main-board.



4. Make sure the CPU fan is plugged to the CPU fan con-nector, than install complete.

- Please use AMD approved cooling fan.
- We recommend you to apply the thermal paste to provide better heat conduction between your CPU and heatsink.
- Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation.
- Please refer to CPU heat sink user's manual for more detail installation procedure.

Step 2: Install memory modules

The motherboard has 3 dual inline memory module(DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot.

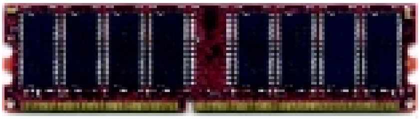
The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.

Total Memory Sizes With Registered DDR DIMM

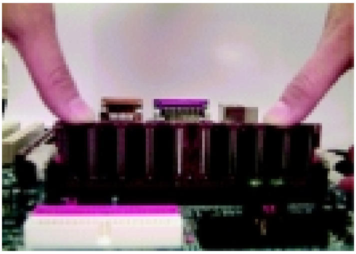
Devices used on DIMM	1 DIMMx64/x72	2 DIMMsx64/x72	3 DIMMsx64/x72
64 Mbit (4Mx4x4 banks)	256 MBytes	512 MBytes	768 MBytes
64 Mbit (2Mx8x4 banks)	128 MBytes	256 MBytes	384 MBytes
64 Mbit (1Mx16x4 banks)	64 MBytes	128 MBytes	192 MBytes
128 Mbit(8Mx4x4 banks)	512 MBytes	1 GBytes	1.5 GBytes
128 Mbit(4Mx8x4 banks)	256 MBytes	512 MBytes	768 MBytes
128 Mbit(2Mx16x4 banks)	128 MBytes	256 MBytes	384 MBytes
256 Mbit(16Mx4x4 banks)	1 GBytes	2 GBytes	3 GBytes
256 Mbit(8Mx8x4 banks)	512 MBytes	1 GBytes	1.5 GBytes
256 Mbit(4Mx16x4 banks)	256 MBytes	512 MBytes	768 MBytes
512 Mbit(16Mx8x4 banks)	1 GBytes	2 GBytes	3 GBytes
512 Mbit(8Mx16x4 banks)	512 MBytes	1 GBytes	1.5 GBytes

Total Memory Sizes With Unbuffered DDR DIMM

Devices used on DIMM	1 DIMMx64/x72	2 DIMMsx64/x72	3 DIMMsx64/x72
64 Mbit (2Mx8x4 banks)	128 MBytes	256 MBytes	384 MBytes
64 Mbit (1Mx16x4 banks)	64 MBytes	128 MBytes	192 MBytes
128 Mbit(4Mx8x4 banks)	256 MBytes	512 MBytes	768 MBytes
128 Mbit(2Mx16x4 banks)	128 MBytes	256 MBytes	384 MBytes
256 Mbit(8Mx8x4 banks)	512 MBytes	1 GBytes	1.5 GBytes
256 Mbit(4Mx16x4 banks)	256 MBytes	512 MBytes	768 MBytes
512 Mbit(16Mx8x4 banks)	1 GBytes	2 GBytes	3 GBytes
512 Mbit(8Mx16x4 banks)	512 MBytes	1 GBytes	1.5 GBytes



DDR



1. The DIMM slot has a notch, so the DIMM memory module can only fit in one direction.
2. Insert the DIMM memory module verticallyinto the DIMM slot. Then push it down.
3. Close the plastic clip at both edges of theDIMM slots to lock the DIMM module.

Reverse the installation steps when you wish to remove the DIMM module.

DDR Introduction

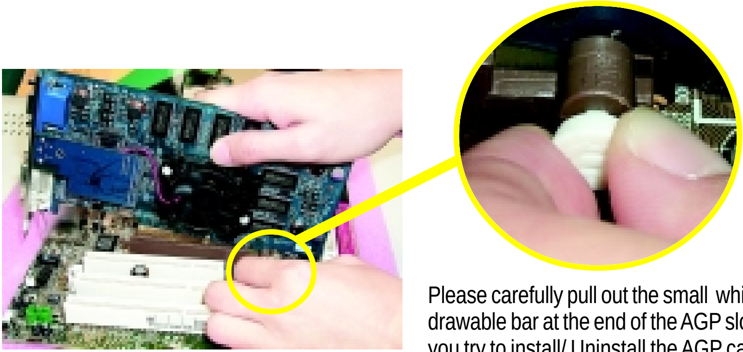
Established on the existing SDRAM industry infrastructure, DDR (Double Data Rate) memory is a high performance and cost-effective solution that allows easy adoption for memory vendors, OEMs and system integrators.

DDR memory is a sensible evolutionary solution for the PC industry that builds on the existing SDRAM infrastructure, yet makes awesome advances in solving the system performance bottleneck by doubling the memory bandwidth. DDR SDRAM will offer a superior solution and migration path from existing SDRAM designs due to its availability, pricing and overall market support. PC2100 DDR memory (DDR266) doubles the data rate through reading and writing at both the rising and falling edge of the clock, achieving data bandwidth 2X greater than PC133 when running with the same DRAM clock frequency. With peak bandwidth of 2.1GB per second, DDR memory enables system OEMs to build high performance and low latency DRAM subsystems that are suitable for servers, workstations, high-end PC's and value desktop SMA systems. With a core voltage of only 2.5 Volts compared to conventional SDRAM's 3.3 volts, DDR memory is a compelling solution for small form factor desktops and notebook applications.

When STR/DIMM LED is ON, do not install/remove DDR from socket.

Step 3: Install expansion cards

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.

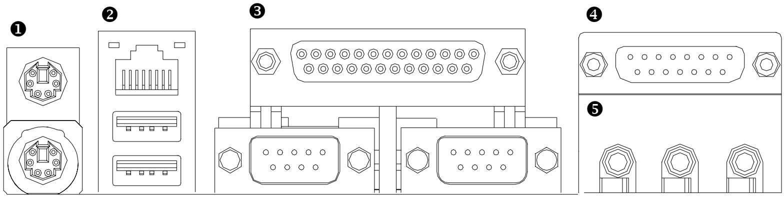


AGP Card

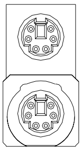
Please carefully pull out the small white-drawable bar at the end of the AGP slot when you try to install/ Uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot .Make sure your AGP card is locked by the small white- drawable bar.

Step 4: Connect ribbon cables, cabinet wires, and power supply

Step4-1:I/O Back Panel Introduction



❶ PS/2 Keyboard and PS/2 Mouse Connector

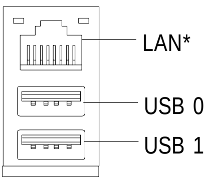


PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

➢This connector supports standard PS/2 keyboard and PS/2 mouse.

❷ USB & LAN Connector

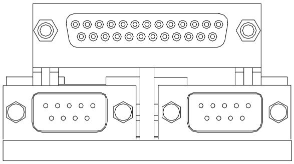


➢Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard,mouse, scanner, zip, speaker..etc. Have a standard USB interface. Also make sure your OS (Win 95 with USB supplement, Win98, Windows 2000, Windows ME, Win NT with SP 6) supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

"*" Only for GA-7VRXP.

❸ Parallel Port , Serial Ports (COMA / COMB)

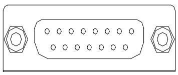
Parallel Port
(25 pin Female)



COMA COMB
Serial Port (9 pin Male)

➢This connector supports 2 standard COM ports ,1 Parallel port . Device like printer can be con nected to Parallel port ; mouse and modem etc can be connected to Serial ports.

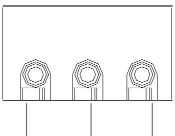
❹ Game /MIDI Ports



Joystick/ MIDI (15 pin Female)

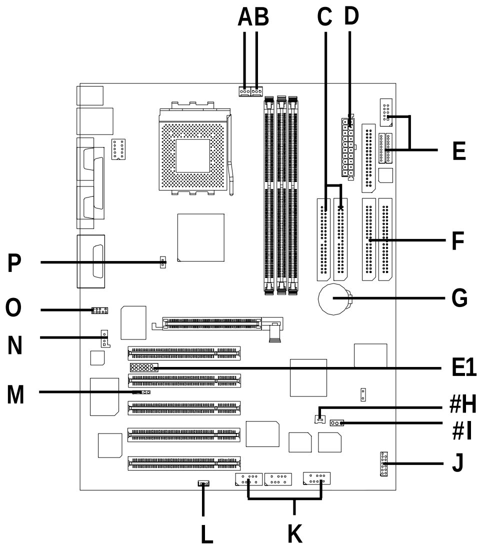
➢This connector supports joystick, MIDI keyboard and other relate audio devices.

❺ Audio Connectors



➢ After install onboard audio driver, you may connect speaker to Line Out jack, micro phone to MIC In jack. Device like CD-ROM , walkman etc can be connected to Line-In jack.

Step4-2: Connectors Introduction



A) CPU FAN	I) CLR_CMOS#
B) SYS FAN	J) F_Panel
C) Floppy/IDE1/IDE2	K) F_USB1,3,4
D) ATX	L) WOL
E/E1)SC/SD/MS* / SC**	M) IR
F) IDE3/IDE4*	N) CD_IN
G) Battery	O) F_AUDIO
H) CI#	P) NB_FAN

"*" Only for GA-7VRXP. "**" Only for GA-7VRX.

"#" Only for GA-7VRX/GA-7VRXP PCB Ver.1.1 use.

A) CPU_FAN (CPU_FAN Connector)

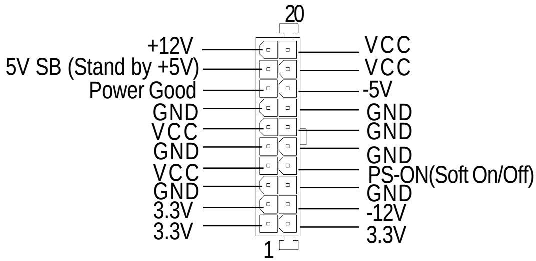


B) SYS_FAN (SYS_FAN Connector)



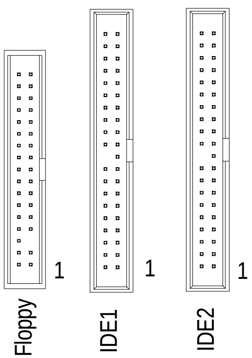
- The CPU fan connector supports Max. current up to 600 mA .

D) ATX (ATX Power)



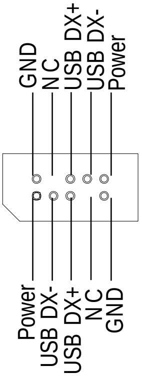
- AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

C) Floppy / IDE1 / IDE2



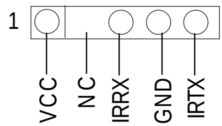
- Important Notice:
  Please connect first harddisk to IDE1
  and connect CDROM to IDE2.

K) F_USB1,3,4
(F_USB3 & 4 connectors in orange are for USB 2.0)



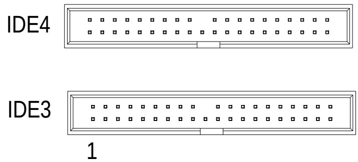
- Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.

M) IR

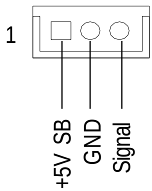


- Be careful with the polarity of the IR connector while you connect the IR. Please contact you nearest dealer for optional IR device.

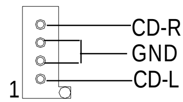
F) IDE3/IDE4 Connector (RAID/ATA133)*



L) WOL (Wake On LAN)

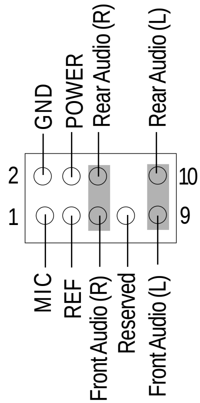


N) CD_IN



"*" Only for GA-7VRXP.

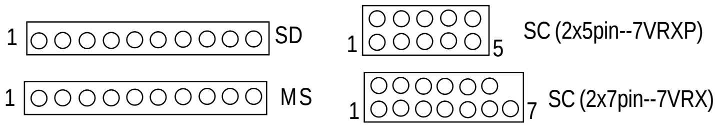
D) F_AUDIO (Front_AUDIO Connector)



➢ If you want to use Front Audio connector, you must remove 5-6 ,9-10 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer.

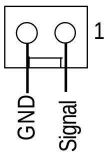
E/E1) SC(Smart Card Interface), SD (Secure Digital Memory Card Interface) , MS (Memory Stick Interface)

(There is either function of SD and MS can be used.)

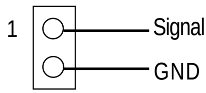


H) CI (Case Open)

Only for GA-7VRX/GA-7VRXP PCB Ver. 1.1 use.

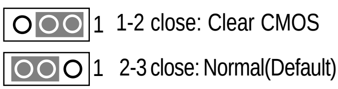


P) NB_FAN

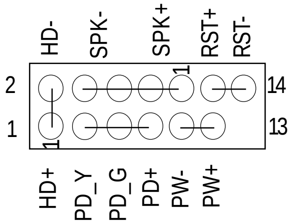


I) CLR_CMOS: Clear CMOS

Only for GA-7VRX/GA-7VRXP PCB Ver. 1.1 use.



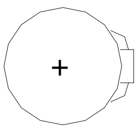
J) F_PANEL (2x7 pins jumper)



HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
SPK (Speaker Connector)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-)
RST (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
PD+/PD_G/PD_Y(Power LED)	Pin 1: LED anode(+) Pin 2: LED cathode(-) Pin 3: LED cathode(-)
PW (Soft Power Connector)	Open: Normal Operation Close: Power On/Off

- Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the front panel jumper according to the pin assignment above.

G) Battery



CAUTION

- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.

Chapter 3 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Power ON the computer and press <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl> - <Alt>- <Del> keys.

CONTROL KEYS

<✍>	Move to previous item
<✍>	Move to next item
<✍>	Move to the item in the left hand
<✍>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<F7>	Load the Setup Defaults
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu (For example: BIOS Ver. :F4)

Once you enter AMI BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from eight setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24k (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP / PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD FAIL-SAFE DEFAULTS	SAVE & EXIT SETUP
LOAD OPTIMIZED DEFAULTS	EXIT WITHOUT SAVING
ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values F6: Fail-Safe Values F7: Optimized Values F8:Dual BIOS/Q-Flash F10:Save & Exit	
Time, Date , Hard Disk Type…	

Figure 1: Main Menu

- **Standard CMOS Features**

  This setup page includes all the items in standard compatible BIOS.

- **BIOS Features Setup**

  This setup page includes all the adjustable items of AMI special enhanced features.

- **Chipset Features Setup**

  This setup page includes all the adjustable items of chipset special features.

- **Power Management Setup**

  This setup page includes all the adjustable items of Green function features.

- **PNP/PCI Configurations**

  This setup page includes all the adjustable configurations of PCI & PnP ISA resources.

- **Load Fail-Safe Defaults**

  Load Fail-Safe Defaults option loads preset system parameter values to set the system in its most stable configurations.

- **Load Optimized Defaults**

  Load Optimized Defaults option loads preset system parameter values to set the system in its highest performance configurations.

- **Integrated Peripherals**

  This setup page includes all onboard peripherals.

- **Hardware Monitor & MISC Setup**

  This setup page is auto detect fan and temperature status.

- **Set Supervisor password**

  Set Change or disable password. It allows you to limit access to the system and/or BIOS setup.

- **Set User password**

  Set Change or disable password. It allows you to limit access to the system.

- **IDE HDD Auto Detection**

  Automatically configure hard disk parameters.

- **Save & Exit Setup**

  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

Standard CMOS Features

AMIBIOS SETUP - STANDARD CMOS SETUP

Date (mm/dd/yyyy) : Fri Mar 16, 2001

Time (hh/mm/ss) : 14:44:35

	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Pri Master :	Auto							
Pri Slave :	Auto							
Sec Master :	Auto							
Sec Slave :	Auto							

Floppy Drive A : 1.44 MB $3^{1/2}$	Base Memory : 640 Kb
Floppy Drive B : Not Installed	Other Memory : 384 Kb
	Extended Memory : 127 Mb
Boot Sector Virus Protection : Disabled	Total Memory : 128 Mb
Month : Jan - Dec	ESC : Exit
Day : 01- 31	↑↓: Select Item
Year : 1990 - 2099	PU / PD / + / - :Modify
	(Shift) F2 : Color

Figure 2: Standard CMOS Setup

✍ Date

The date format is <week>, <month>, <day>, <year>.

- Week — The week, from Sun to Sat, determined by the BIOS and is display only
- Month — The month, Jan. Through Dec.
- Day — The day, from 1 to 31 (or the maximum allowed in the month)
- Year — The year, from 1990 through 2099

✍ **Time**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

✍ **Primary Master, Slave / Secondary Master, Slave**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

If a hard disk has not been installed select NONE and press <Enter>.

✍ **Floppy Drive A / Drive B**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

✍Boot Sector Virus Protection

If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem.

Enabled	Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table
Disabled	No warning message to appear when anything attempts to access the boot sector or hard disk partition table (Default Value)

✍Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

Other Memory

This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1 MB in the CPU's memory address map.

BIOS Features Setup

AMIBIOS SETUP - BIOS FEATURES SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved		
1st Boot Device	: Floppy	
2nd Boot Device	: IDE-0	
3rd Boot Device	: CDROM	
S.M.A.R.T. for Hard Disks	: Disabled	
Interrupt Mode	: APIC	
BootUp Num-Lock	: On	
Floppy Drive Seek	: Disabled	ESC: Quit ↑↓→←: Select Item
Password Check	: Setup	F1 : Help PU/PD+/-/ : Modify
BIOS Flash Protection	: Auto	F5 : Old Values (Shift)F2: Color
		F6 : Fail-Safe F7: Optimized
		F8 :Dual BIOS/Q-Flash

Figure 3: BIOS Features Setup

✍1st / 2nd / 3rd Boot device

Floppy	Select your boot device priority by Floppy.
ZIP A:/LS120	Select your boot device priority by ZIP A:/LS120.
ATAPI ZIP C:	Select your boot device priority by ATAPI ZIP C:.
CDROM	Select your boot device priority by CDROM.
SCSI	Select your boot device priority by SCSI.
NETWORK	Select your boot device priority by NETWORK.
Disabled	Disable this function.
IDE-0~3	Select your boot device priority by IDE-0~3.
USB FDD	Select your boot device priority by USB FDD.

✍ S.M.A.R.T. for Hard Disks

- Enabled Enable HDD S.M.A.R.T. Capability.
- Disabled Disable HDD S.M.A.R.T. Capability. (Default value)

✍ Interrupt Mode

- APIC Through IOAPIC generate more IRQ for system use.(Default value)
- PIC Use AT stantard IRQ controlles to generate IRQ.

When you already have IOAPIC enable system and want to upgrade the system please note, since running an IOAPIC enabled OS (like Windows NT,Windows 2000, Windows XP...) system with none IOAPIC HW support will cause the system to hang. Following are some situations users might run into:

1.An IOAPIC enabled OS and change the BIOS setting from IOAPIC to PIC, this will cause your system to hang.

✍ Boot Up Num-Lock

- On Keypad is number keys. (Default value)
- Off Keypad is arrow keys.

✍ Floppy Drive Seek

During POST, BIOS will determine the floppy disk drive installed is 40or 80 tracks. 360 K type is 40 tracks 720 K, 1.2 M and 1.44 M are all 80 tracks.

- Enabled BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720 K, 1.2 M or 1.44 M drive type as they are all 80tracks.
- Disabled BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360 K. (Default value)

✍ Password Check

Please refer to the detail on P.53

- Always The user must enter correct password in order to access the system and/or BIOS Setup.
- Setup The user must enter correct password in order to access BIOS setup utility. (Default Value)

✍ BIOS Flash Protection

This field lets you determine the states that flash BIOS.

☛Auto	BIOS enables flash write access automatically when updating BIOS data/ DMI/ESCD. (Default Value)
☛Enabled	During POST, DMI/ESCD would not be updated. But flash tools can update BIOS always.

Chipset Features Setup

AMIBIOS SETUP - CHIPSET FEATURES SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved		
Top Performance	:Disabled	
Fast Command	:Ultra	
Configure SDRAM by SPD	:Enabled	
SDRAM Frequency	:Auto	
SDRAM CAS# Latency	:2	
SDRAM Command Rate	:1T Command	
AGP Mode	:4X	
AGP Comp. Driving	:Auto	
Manual AGP Comp. Driving	:DA	
AGP Fast Write	:Enabled	
AGP Aperture Size	:128MB	
AGP Read Synchronization	:Enabled	
PCI Delay Transaction	:Enabled	ESC: Quit ↴↴↴↴↴↴: Select Item
USB Controller	:All USB Port	F1 : Help PU/PD+/-/ : Modify
USB Legacy Support	:Disabled	F5 : Old Values (Shift)F2: Color
USB Port 64/60 Emulation	:Disabled	F6 : Fail-Safe F7 : Optimized
		F8 :Dual BIOS/Q-Flash

Figure 4: Chipset Features Setup

If you require more advanced BIOS settings please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" instead of "DEL" key during POST.

✍Top Performance

- Disabled — Top Performance Disabled. (Default Value)
- Enabled — Top Performance Enabled.

✍Fast Command

- Ultra — Set Fast Command to Ultra. (Default Value)
- Fast — Set Fast Command to Fast..
- Normal — Set Fast Command to Normal..

✍ Configure SDRAM by SPD

- Disabled — Disabled Configure SDRAM Timing by SPD.
- Enabled — Enabled Configure SDRAM Timing by SPD. (Default Value)

✍ DRAM Frequency

- 266MHz — Set DRAM Frequency is 266MHz.
- 333MHz — Set DRAM Frequency is 333MHz.
- Auto — Set DRAM Frequency is Auto. (Default Value).

✍ SDRAM CAS # Latency

- 2 — For Fastest SDRAM DIMM module. (Default Value).
- 2.5 — For Slower SDRAM DIMM module.

✍ SDRAM Command Rate

- 2T Command — Set SDRAM Command Rate to 2T Command.
- 1T Command — Set SDRAM Command Rate to 1T Command.(Default Value)

✍ AGP Mode

- 4X — Set AGP Mode is 4X. (Default Value)
- 1X — Set AGP Mode is 1X.
- 2X — Set AGP Mode is 2X.

✍ AGP Comp. Driving

- Auto — Set AGP Comp. Driving is Auto. (Default Value)
- Manual — Set AGP Comp. Driving is Manual.

If AGP Comp. Driving is Manual.

Manual AGP Comp. Driving :00~FF

✍ AGP Fast Write

- Disabled — Disabled AGP Fast Write
- Enabled — Enabled AGP Fast Write (Default Value)

✍ AGP Aperture Size

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8 MB.
16MB	Set AGP Aperture Size to 16 MB.
32MB	Set AGP Aperture Size to 32 MB.
64MB	Set AGP Aperture Size to 64 MB.
128MB	Set AGP Aperture Size to 128 MB. (Default Value)
256MB	Set AGP Aperture Size to 256 MB.

✍ AGP Read Synchronization

Enabled	Enable AGP Read Synchronization. (Default Value)
Disabled	Disable AGP Read Synchronization.

✍ PCI Delay Transaction

Enabled	Enabled PCI Delay Transaction. (Default Value)
Disabled	Disabled PCI Delay Transaction.

✍ USB Controller

Disabled	Disable USB Controller function.
USB Port 1&2	Enabled USB Port 1&2.
USB Port 2&3	Enabled USB Port 2&3.
USB Port 1&3	Enabled USB Port 1&3.
USB1	Enabled USB Port 1.
USB2	Enabled USB Port 2.
USB3	Enabled USB Port 3.
All USB Port	Enabled All USB Port . (Default Value)

✍ USB Legacy Support

Keyboard/FDD	Set USB Legacy Support Keyboard / Floppy.
KB/Mouse/FDD	Set USB Legacy Support Keyboard / Mouse /Floppy.
Disabled	Disabled USB Legacy Support Function. (Default Value)

✍ **USB Port 64/60 Emulation**

☞Enabled	To use USB mouse under Win NT environment, set USB Legacy Support to KB/Mouse/FDD and USB Port 64/60 Emulation to enabled.
☞Disabled	Disable this Function. (Default Value)

Power Management Setup

AMIBIOS SETUP - POWER MANAGEMENT SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved			
ACPI Standby State	:S1/POS	RTC Alarm Date	:15
USB Dev Wakeup From S3-S5	:Disabled	RTC Alarm Hour	:12
Suspend Time Out(Minute)	:Disabled	RTC Alarm Minute	:30
IRQ3	:Monitor	RTC Alarm Second	:30
IRQ 4	:Monitor		
IRQ 5	:Ignore		
IRQ 7	:Monitor		
IRQ 9	:Ignore		
IRQ 10	:Ignore		
IRQ 11	:Ignore		
IRQ 13	:Ignore		
IRQ 14	:Monitor		
IRQ 15	:Ignore		
Soft-off by Power Button	:Instant off		
AC Back Function	:Soft-Off		
Modem Ring On/Wake On Lan	:Enabled	ESC: Quit ˥ ˥ ˥ ˥ ˥ ˥ ˥˥˥˥: Select Item	
PME Event Wake Up	:Enabled	F1 : Help	PU/PD+/-/ : Modify
Keyboard Wakeup From	:S1(Suspend)	F5 : Old Values	(Shift)F2: Color
PS/2 Mouse Wakeup From	:S1(Suspend)	F6 : Fail-Safe	F7 : Optimized
Resume On RTC Alarm	:Disabled	F8 : Dual BIOS/Q-Flash	

Figure 5: Power Management Setup

✍ ACPI Standby State

- S1/POS Set ACPI standby state is S1. (Default Value)
- S3/STR Set ACPI standby state is S3.

✍ USB Dev Wakeup From S3~S5(for USB 1.1 device only)

USB Dev Wakeup From S3~S5 can be set when ACPI standby state set to S3/STR.

- Enabled Enable USB Dev Wakeup From S3~S5.
- Disabled Disable USB Dev Wakeup From S3~S5. (Default Value).

✍ Suspend Time Out (Minute.)

Disabled	Disabled Suspend Time Out Function. (Default Value)
1	Enabled Suspend Time Out after 1min.
2	Enabled Suspend Time Out after 2min.
4	Enabled Suspend Time Out after 4min.
8	Enabled Suspend Time Out after 8min.
10	Enabled Suspend Time Out after 10min.
20	Enabled Suspend Time Out after 20min.
30	Enabled Suspend Time Out after 30min.
40	Enabled Suspend Time Out after 40min.
50	Enabled Suspend Time Out after 50min.
60	Enabled Suspend Time Out after 60min.

✍ IRQ 3~IRQ15

Ignore	Ignore IRQ3 ~IRQ15.
Monitor	Monitor IRQ3~IRQ15.

✍ Soft-off by Power Button

Instant-off	Soft switch ON/OFF for POWER ON/OFF. (Default Value)
Delay 4 sec	Soft switch on 4sec for power OFF.

✍ AC Back Function

Soft-Off	When AC-power back to the system, the system will be in "Soft-Off" state. (Default Value)
Full-On	When AC-power back to the system, the system will be in "Full-On" state.
Memory	When AC-power back to the system, the system will return to the Last state before AC-power off.

✍ Modem Ring On/Wake On LAN

- Disabled — Disabled Resume On Ring / LAN.
- Enabled — Enabled Resume On Ring / LAN. (Default Value)

✍ PME Event Wake Up

- Disabled — Disable PME Event Wake Up.
- Enabled — Enabled PME Event Wake Up. (Default Value)

✍ Keyboard Wakeup From

- S1(Suspend) — Keyboard is able to Wakeup the system from S1(Suspend) state. (Default value)
- S1/S3 — Keyboard is able to Wakeup the system from S1/S3 state.
- S1/S3/S4/S5 — Keyboard is able to Wakeup the system from S1/S3/S4/S5 state.

✍ PS/2 Mouse Wakeup From

- S1(Suspend) — PS/2 Mouse is able to Wakeup the system from S1(Suspend) state. (Default value)
- S1/S3 — PS/2 Mouse is able to Wakeup the system from S1/S3 state.
- S1/S3/S4/S5 — PS/2 Mouse is able to Wakeup the system from S1/S3/S4/S5 state.

✍ Resume On RTC Alarm

You can set "RTC Alarm Power On" item to enabled and key in Data/time to power on system.

- Disabled — Disable this function. (Default Value)
- Enabled — Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

RTC Alarm Date:Everyday, 1~31

RTC Alarm Hour:0~23

RTC Alarm Minute : 0~59

RTC Alarm Second:0~59

PNP/PCI Configuration

AMIBIOS SETUP - PNP/PCI CONFIGURATION (C) 1999 American Megatrends, Inc. All Rights Reserved	
VGA Boot From : AGP PCI Slot 1/5 IRQ Priority : Auto PCI Slot 2 IRQ Priority : Auto PCI Slot 3 IRQ Priority : Auto PCI Slot 4 IRQ Priority : Auto	
	ESC: Quit ↑↓←→ : Select Item F1 : Help PU/PD+/-/ : Modify F5 : Old Values (Shift)F2: Color F6 : Fail-Safe F7 : Optimized F8 :Dual BIOS/Q-Flash

Figure 6: PNP/PCI Configuration

VGA Boot From

AGP	Set VGA Boot from AGP VGA Card. (Default Value)
PCI	Set VGA Boot from PCI VGA Card.

PCI Slot1/5, 2, 3, 4 IRQ Priority

Auto	The system will reserved a free IRQ for PCI slot 1/5, 2, 3, 4 device. (Default Value)
3	The system will reserved IRQ3 for PCI slot 1/5, 2, 3, 4device if no legacy ISA device using IRQ3.
4	The system will reserved IRQ for PCI slot 1/5, 2, 3, 4 device if no legacy ISA device using IRQ4.
5	The system will reserved IRQ5 for PCI slot 1/5, 2, 3, 4device if no legacy ISA device using IRQ5.

- 7 The system will reserved IRQ7 for PCI slot 1/5, 2, 3, 4 device if no legacy ISA device using IRQ7.
- 9 The system will reserved IRQ9 for PCI slot 1/5, 2, 3, 4 device if no legacy ISA device using IRQ9.
- 10 The system will reserved IRQ10 for PCI slot 1/5, 2, 3, 4 device if no legacy ISA device using IRQ10.
- 11 The system will reserved IRQ11 for PCI slot 1/5, 2, 3, 4 device if no legacy ISA device using IRQ11.

Load Fail-Safe Defaults

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24k

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STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONFI	
LOAD FAIL-SAFE DEFAULTS	SAVE & EXIT SETUP
LOAD OPTIMIZED DEFAULTS	EXIT WITHOUT SAVING

Load Fail-Safe Defaults? (Y/N)?N

ESC: Quit ↴↴↴↴↴ : Select Item (Shift)F2 :Change Color F5: Old Values

F6: Fail-Safe Values F7: Optimized Values F8:Dual BIOS/Q-Flash F10:Save & Exit

Load Fail-Safe Defaults except Standard CMOS SETUP

Figure 7: Load Fail-Safe Defaults

✍ Load Fail-Safe Defaults

Fail-Safe defaults contain the most appropriate system parameter values of to configure the system to achieve maximum stability.

Load Optimized Defaults

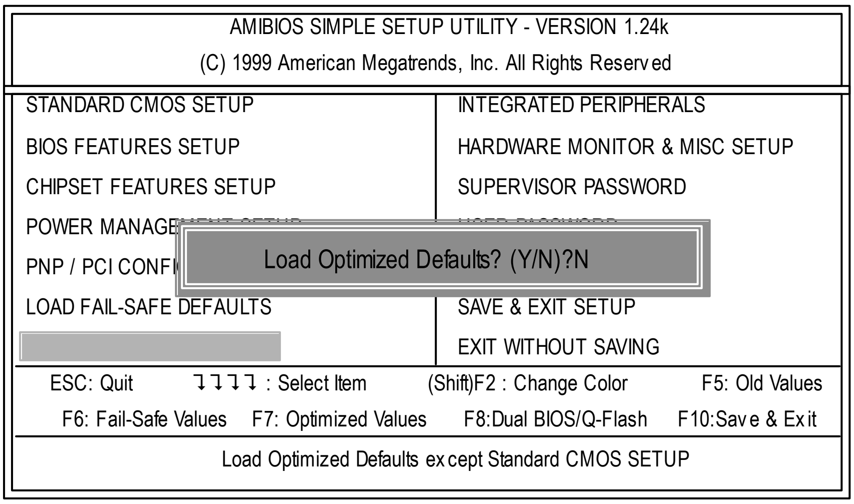


Figure 8: Load Optimized Defaults

✍ Load Optimized Defaults

Optimized defaults contain the most appropriate system parameter values to configure the system to achieve maximum performance.

Integrated Peripherals

AMIBIOS SETUP - INTEGRATED PERIPHERALS

OnBoard FDC	:Auto		
OnBoard Serial Port 1	:Auto		
OnBoard Serial Port 2	:Auto		
Serial Port2 Mode	:Normal		
OnBoard Parallel Port	:Auto		
Parallel Port Mode	:ECP		
Parallel Port IRQ	:Auto		
Parallel Port DMA	:Auto		
OnBoard MIDI Port	:300		
OnBoard Game Port	:Enabled		
OnBoard SC Interface*	:Disabled		
OnBoard MS/SD Interface*	:Memory Stick		
OnBoard IDE	:Both		
OnBoard Sound Chip*	:Enabled		
OnBoard LAN Chip*	:Enabled	ESC : Quit	↑↓←→ : Select Item
OnBoard USB 2.0 Chip	:Enabled	F1 : Help	PU/PD+/-/ : Modify
OnBoard PROMISE Chip*	:ATA	F5 : Old Values	(Shift)F2: Color
		F6 : Fail-Safe	F7 : Optimized
		F8 :Dual BIOS/Q-Flash	

Figure 9: Integrated Peripherals

✍ On Board FDC

- Auto — Set On Board FDC is Auto (Default Value).
- Disabled — Disabled On Board FDC
- Enabled — Enabled On Board FDC

"*" For GA-7VRXP Only.

✍Onboard Serial Port 1

Auto	BIOS will automatically setup the port 1 address (Default Value).
3F8/COM1	Enable onboard Serial port 1 and address is 3F8.
2F8/COM2	Enable onboard Serial port 1 and address is 2F8.
3E8/COM3	Enable onboard Serial port 1 and address is 3E8.
2E8/COM4	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

✍Onboard Serial Port 2

Auto	BIOS will automatically setup the port 2 address (Default Value).
3F8/COM1	Enable onboard Serial port 2 and address is 3F8.
2F8/COM2	Enable onboard Serial port 2 and address is 2F8.
3E8/COM3	Enable onboard Serial port 2 and address is 3E8.
2E8/COM4	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

✍Serial Port 2 Mode

Normal	Normal operation. (Default Value)
IrDA	Onboard I/O chip supports IrDA
ASK IR	Onboard I/O chip supports ASK IR.
SCR	Onboard I/O chip supports SCR.

SCR option is shown only when there's SCR hardware function is installed.

✍OnBoard Parallel port

378	Enable On Board LPT port and address is 378.
278	Enable On Board LPT port and address is 278.
3BC	Enable On Board LPT port and address is 3BC.
Auto	Set On Board LPT port is Auto. (Default Value)
Disabled	Disable On Board LPT port.

✍Parallel Port Mode

EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port. (Default Value)
Normal	Normal Operation.
EPP+ECP	Using Parallel port as Enhanced Parallel Port & Extended Capabilities Port.

✍Parallel Port IRQ

7	Set Parallel Port IRQ is 7.
Auto	Set Auto to parallel Port IRQ DMA Channel. (Default Value).
5	Set Parallel Port IRQ is 5.

✍Parallel Port DMA

Auto	Set Auto to parallel port mode DMA Channel.(Default Value).
3	Set Parallel Port DMA is 3.
1	Set Parallel Port DMA is 1.
0	Set Parallel Port DMA is 0.

✍OnBoard MIDI Port

300	Set 300 for MIDI Port. (Default Value)
310	Set 310 for MIDI Port .
320	Set 320 for MIDI Port.
330	Set 330 for MIDI Port.
Disabled	Disabled this function.

✍OnBoard Game Port

Enabled	Enabled onBoard Game Port.(Default Value)
Disabled	Disabled onBoard Game Port.

✍OnBoard SC Interface*

- Enabled Enabled onBoard SC Interface.
- Disabled Disabled onBoard SC Interface.(Default Value)

✍OnBoard MS/SD Interface*

- Memory Stick Set MS/SD Interface to Memory Stick.(Default value)
- Secure Digital Set MS/SD Interface to Secure Digital.
- Disabled Disabled MS/SD Interface.

✍ OnBoard IDE

- Disabled Disabled OnBoard IDE
- Both Set OnBoard IDE is Both (Default Value).
- Primary Set OnBoard IDE is Primary
- Secondary Set OnBoard IDE is Secondary

✍Onboard Sound Chip*

- Enable Enable onboard Sound function.(Default value)
- Disable Disable onboard Sound function.

✍ OnBorard Lan Chip*

- Enabled Enabled OnBoard Lan Chip. (Default Value)
- Disabled Disabled OnBoard Lan Chip.

If "OnBoard SC Interface" is set to "Enabled" and "OnBoard MS/SD Interface" set to "Memory Stick" at the same time, there will not be enough IRQ resource to solve this issue, there are two alternative solutions:

1.Use USB Mouse instead of PS/2 Mouse.

2.Disabled either "Onboard Serial Port1" , "Onboard Serial Port2" or "Onboard Parallel Port" in BIOS setting.

"*" For GA-7VRXP Only.

✍ **Onboard USB 2.0 Device**

- Enable — Enable onboard USB 2.0 Device.(Default value)
- Disable — Disable onboard USB 2.0 Device.

✍ **Onboard PROMISE Chip***

- RAID — Enable onboard RAID Device.
- ATA — Enable onboard ATA Device.(Default value)
- Disable — Disable onboard ATA/RAID Device.

"*" For GA-7VRXP Only.

Hardware Monitor & MISC Setup

AMIBIOS SETUP - HARDWARE MONITOR & MISC SETUP

AGP Voltage	:1.5V		
DDR Voltage	:2.5V		
VCore Voltage	:Normal		
CPU Host Clock (Mhz)	:By Hw		
#Reset Case Open Status	:No		
#Case Status	:Open		
CPU Temp.	: 35°C/ 95°F		
System Temp.	: 33°C/ 91°F		
CPU Fan Speed	: 5273 RPM		
System Fan Speed	: 0 RPM		
Vcore	: +1.632V		
Vtt	: +3.344V		
+3.300V	: +3.296V	F1 : Help	PU/PD+/-/ : Modify
+5.000V	: +5.080V	F5 : Old Values	(Shift)F2: Color
+12.000V	: +11.840V	F6 : Fail-Safe	F7 : Optimized
5V SB	: +4.972V	F8 : Dual BIOS/Q-Flash	

Figure 10: Hardwar & Monitor & MISC Setup

✍ AGP Voltage

1.5V	Set AGP voltage to 1.5V. (Default Value)
1.6V	Set AGP voltage to 1.6V.
1.7V	Set AGP voltage to 1.7V.
1.8V	Set AGP voltage to 1.8V.

✍ DDR Voltage

2.5V	Set DDR voltage to 2.5V. (Default Value)
2.6V	Set DDR voltage to 2.6V.
2.7V	Set DDR voltage to 2.7V.
2.8V	Set DDR voltage to 2.8V.

"#" Only for GA-7VRX/GA-7VRXP PCB Ver.1.1 use.

✍ VCore Voltage

- Normal — Normal Function.(Default Value)
- +5.0% — Set VCore voltage to +5.0% .
- +7.5% — Set VCore voltage to +7.5% .
- +10.0% — Set VCore voltage to +10.0% .

✍ CPU Host Clock (Mhz)

- By Hw — Set CPU Host Clock by Hw. (Default Value)
- 133 — Set CPU Host Clock to 133MHz~161MHz.
- 100 — Set CPU Host Clock to 100Mhz~128MHz.

#☞ Reset Case Open Status

#☞ Case Status

If the case is closed, "Case Opened" will show "No".
If the case have been opened, "Case Opened" will show "Yes".
If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Yes" and save CMOS, your computer will restart.

✍ CPU / System Temp.

- Detect CPU / SystemTemperature automatically.

✍ CPU / System FAN Speed

- Detect CPU / System Fan speed status automatically .

✍ Current Voltage (V) VCORE / Vtt / +3.3V / +12V / +5V / 5VSB

- Detect system's voltage status automatically.

"#" Only for GA-7VRX/GA-7VRXP PCB Ver.1.1 use.

Set Supervisor / User Password

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24k
(C) 1999 American Megatrends, Inc. All Rights Reserved

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONF	
LOAD FAIL-SAFE DEFAULTS	SAVE & EXIT SETUP
LOAD OPTIMIZED DEFAULTS	EXIT WITHOUT SAVING

Enter new supervisor password:

ESC: Quit ↑↓→←: Select Item (Shift)F2 : Change Color F5: Old Values
F6: Fail-Safe Values F7: Optimized Values F8:Dual BIOS/Q-Flash F10:Save & Exit

Change / Set / Disable Password

Figure 11: Password Setting

Type the password, up to six characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords: a SUPERVISOR PASS WORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "Always" at "Password Check" in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "Setup" at "Password Check" in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

IDE HDD Auto Detection

AMIBIOS SETUP - STANDARD CMOS SETUP

Date (mm/dd/yyyy) : Fri Mar 16, 2001

Time (hh/mm/ss) : 14:44:35

	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Pri Master :	Auto							
Pri Slave :	Auto							
Sec Master :	Auto							
Sec Slave :	Auto							

Floppy Drive A : 1.44 MB 3$^{1/2}$	Base Memory : 640 Kb
Floppy Drive B : Not Installed	Other Memory : 384 Kb
	Extended Memory : 255 Mb
Boot Sector Virus Protection : Disabled	Total Memory : 256 Mb
Month : Jan - Dec	ESC : Exit
Day : 01- 31	˥˥˥ : Select Item
Year : 1990 - 2099	PU / PD / + / - :Modify
	(Shift) F2 : Color

Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

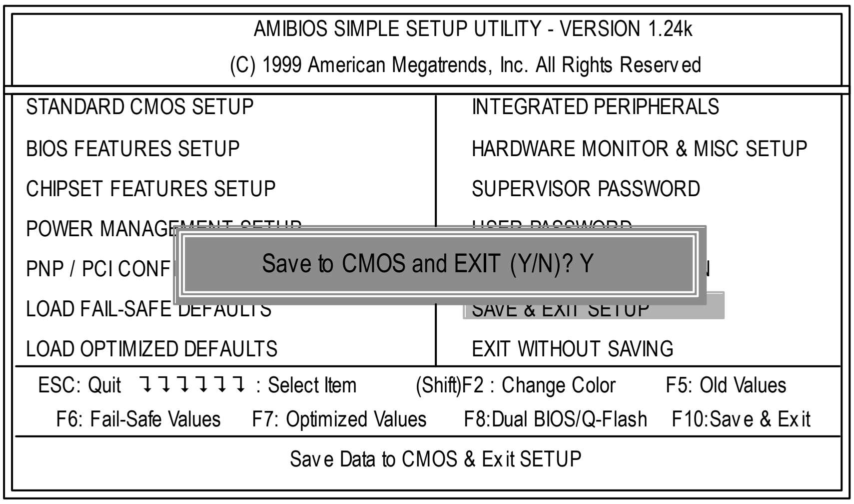


Figure 13: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

Exit Without Saving

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24k

(C) 1999 American Megatrends, Inc. All Rights Reserved

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONF	
LOAD FAIL-SAFE DEFAULTS	SAVE & EXIT SETUP
LOAD OPTIMIZED DEFAULTS	EXIT WITHOUT SAVING

Quit Without Saving (Y/N)? N

ESC: Quit ↑↓→← : Select Item (Shift)F2 : Change Color F5: Old Values

F6: Fail-Safe Values F7: Optimized Values F8:Dual BIOS/Q-Flash F10:Save & Exit

Abandon all Datas & Exit SETUP

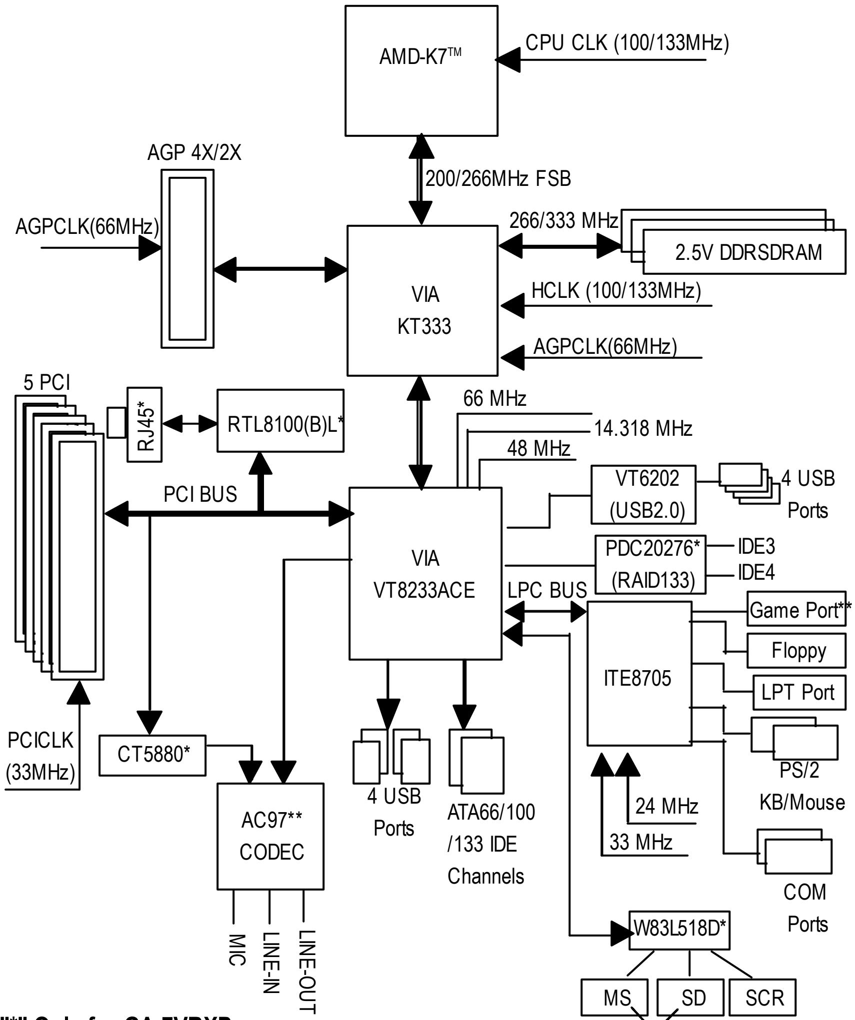
Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS.

Type "N" will return to Setup Utility.

Chapter 4 Technical Reference

Block Diagram



"*" Only for GA-7VRXP.

"" Only for GA-7VRX.**

Dual BIOS & Q-Flash Utility Introduction

A. What is Dual BIOS Technology?

Dual BIOS means that there are two system BIOS (ROM) on the motherboard, one is the Main BIOS and the other is Backup BIOS. Under the normal circumstances, the system works on the Main BIOS. If the Main BIOS is corrupted or damaged, the Backup BIOS can take over while the system is powered on. This means that your PC will still be able to run stably as if nothing has happened in your BIOS.

B. How to use Dual BIOS and Q-Flash Utility?

a. Boot Screen



b. Dual BIOS Utility

Dual BIOS Utility	
Boot From..Main BIOS	
Main ROM Type..SST 39SF020	
Backup ROM Type..SST 39SF020	
Wide Range Protection	Disable
Boot From	MainBIOS
Auto Recovery	Enable
Halt On Error	Disable
Copy Main ROM Data to Backup	
Load Default Settings	
Save Settings to CMOS	
Q-Flash Utility	
Load Main BIOS From Floppy	
Load Backup BIOS From Floppy	
Save Main BIOS to Floppy	
Save Backup BIOS to Floppy	
PgDn/PgUp:Modify ↑↓:Move ESC:Reset	F10:Power Off

c. Dual BIOS Item explanation:

BIOS will auto detect:

Boot From : Main BIOS

Main ROM Type : SST 39SF020

Backup ROM Type : SST 39SF020

Wide Range Protection: Disable(Default), Enable

Status 1:

If any failure (ex. Update ESCD failure, checksum error or reset…) occurs in the Main BIOS , just before the Operating System is loaded and after the power is on, and that the Wide Range Protection is set to "Enable", the PC will boot from Backup BIOS automatically.

Status 2:

If the ROM BIOS on peripherals cards(ex. SCSI Cards, LAN Cards,..) emits signals to request restart of the system after the user make any alteration on it, the boot up BIOS will not be changed to the Backup BIOS.

Boot From : Main BIOS (Default), Backup BIOS

Status 1:

The user can set to boot from main BIOS or Backup BIOS.

Auto Recovery : Enabled(Default), Disabled

When one of the Main BIOS or Backup BIOS occurs checksum failure, the working BIOS will automatically recover the BIOS of checksum failure.

(In the Power Management Setup of the BIOS Setting, if ACPI Suspend Type is set to Suspend to RAM, the Auto Recovery will be set to Enable automatically.)

(If you want to enter the BIOS setting, please press "Del" key when the boot screen appears.)

Halt On Error : Disable(Default), Enable

If the BIOS occurs a checksum error or the Main BIOS occurs a WIDE RANGE PROTECTION error and Halt On BIOS Defects set to Enable, the PC will show mes sages on the boot screen, and the system will pause and wait for the user's instruction.

If Auto Recovery: Disable, it will show <or the other key to continue.>

If Auto Recovery: Enable, it will show <or the other key to Auto Recover.>

Copy Main ROM Data to Backup

Backup message:

Are you sure to copy BIOS?

[Enter] to continue or [Esc] to abort...

The means that the Main BIOS works normally and could automatically recover the Backup BIOS. Or the means that the Backup BIOS works normally and could automatically recover the Main BIOS.

(This auto recovery utility is set by system automatically and can't be changed by user.)

C. What is Q-Flash Utility?

Q-Flash utility is a pre-O.S. BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS.

D. How to use Q-Flash?

Load Main (Backup) BIOS From Floppy

✍ In the A:drive, insert the "BIOS" diskette, then Press Enter to Run.

✍ You can use the light bar to select item. then Press "Enter".

✍ For Example: BIOS File name: 7VRXP.E8

Dual BIOS Utility

Boot From..Main BIOS
Main ROM Type..SST 39SF020
Backup ROM Type...SST 39SF020

3 file(s) found

COMMAND.COM	92.8K
FLASH848.EXE	472.16K
7VRXP.E8	256K
Total size: 1.39M	Free size:316k
F5:Refresh	DEL:Delete

Q-Flash Utility

Load Main BIOS From Floppy
Load Backup BIOS From Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy

PgDn/PgUp:Modify ↿⇂:Move ESC:Reset F10:Power Off

Reading BIOS file from Floppy
Don't Turn Off Power or RESET System...

CHECKSUM=78B7
Are you sure to update BIOS?
[Enter] to continue or [Esc] to abort.....

!!COPY BIOS Complete-Pass!!

Please press any key to continue

Congratulation! You have completed the flashed and now can restart system.

Save Main (Backup) BIOS to Floppy

✍In the A:drive, insert the "BIOS" diskette, then Press Enter to Run.

✍You can use the light bar to select item. then Press "Enter".

Dual BIOS Utility

Boot From...Main BIOS

Main ROM Type...SST 39SF020

Backup ROM Type...SST 39SF020

TYPE FILE NAME

File name:

3 file(s) found

COMMAND.COM	92.8K
FLASH848.EXE	472.16K
7VRXP.E8	256K

Total size: 1.39M	Free size:316k
F5:Refresh	DEL:Delete

Load Backup BIOS From Floppy

Save Main BIOS to Floppy

Save Backup BIOS to Floppy

PgDn/PgUp:Modify ↑↓:Move ESC:Reset F10:Power Off

Saving BIOS to floppy

Don't Turn Off Power or RESET System...

DualBIOS™ Technology FAQ

GIGABYTE Technology is pleased to introduce DualBIOS technology, a hot spare for your system BIOS. This newest "Value-added" feature, in a long series of innovations from GIGABYTE, is available on this motherboard. Future GIGABYTE motherboards will also incorporate this innovation.

What's DualBIOS™?

On GIGABYTE motherboards with DualBIOS there are physically two BIOS chips. For simplicity we'll call one your "Main BIOS" and the other we'll call your "Backup" BIOS (your "hot spare"). If your Main BIOS fails, the Backup BIOS almost automatically takes over on your next system boot. Almost automatically and with virtually zero down time! Whether the problem is a failure in flashing your BIOS or a virus or a catastrophic failure of the Main BIOS chip, the result is the same - the Backup BIOS backs you up, almost automatically.

I. Q: What is DualBIOS™ technology?

Answer:

DualBIOS technology is a patented technology from Giga-Byte Technology. The concept of this technology is based on the redundancy and fault tolerance theory. DualBIOS™ technology simply means there are two system BIOSes (ROM) integrated onto the motherboard. One is a main BIOS, and the other is a backup BIOS. The mainboard will operate normally with the main BIOS, however, if the main BIOS is corrupt or damaged for various reasons, the backup BIOS will be automatically used when the system powered-On. Your PC will operate as before the main BIOS was damaged, and is completely transparent to the user.

II. Q: Why does anyone need a motherboard with DualBIOS™ technology?

Answer:

In today's systems there are more and more BIOS failures. The most common reasons are virus attacks, BIOS upgrade failures, and/or deterioration of the BIOS (ROM) chip itself.

1. New computer viruses are being found that attack and destroy the system BIOS. They may corrupt your BIOS code, causing your PC to be unstable or even not boot normally.
2. BIOS data will be corrupted if a power loss/surge occurs, or if a user resets the system, or if the power button is pressed during the process of performing a system BIOS upgrade.
3. If a user mistakenly updates their mainboard with the incorrect BIOS file, then the system may not be able to boot correctly. This may cause the PC system hang in operation or during boot.
4. A flash ROM's life cycle is limited according to electronic characteristics. The modern PC utilizes the Plug and Play BIOS, and is updated regularly. If a user changes peripherals often, there is a slight chance of damage to the flash ROM.

   With Giga-Byte Technology's patented DualBIOS™ technology you can reduce the possibility of hangs during system boot up, and/or loss BIOS data due to above reasons. This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

III. Q: How does DualBIOS™ technology work?

Answer:

1. DualBIOS™ technology provides a wide range of protection during the boot up procedure. It protects your BIOS during system POST, ESCD update, and even all the way to PNP detection/assignment.
2. DualBIOS™ provides automatic recovery for the BIOS. When the first BIOS used during boot up does not complete or if a BIOS checksum error occurs, boot-up is still possible. In the DualBIOS™ utility, the "Auto Recovery" option will guarantee that if either the main BIOS or backup BIOS is corrupted, the DualBIOS™ technology will use the good BIOS and correct the wrong BIOS automatically.
3. DualBIOS™ provides manual recovery for the BIOS. DualBIOS™ technology contains a built-in flash utility, which can flash your system BIOS from backup to main and/or visa versa. There is no need for an OS-dependent flash utility program.
4. DualBIOS™ contains a one-way flash utility. The built-in one-way flash utility will ensure that the corrupt BIOS is not mistaken as the good BIOS during recovery and that the correct BIOS (main vs. backup) will be flashed. This will prevent the good BIOS from being flashed.

IV. Q: Who Needs DualBIOS™ technology?

Answer:

1. Every user should have DualBIOS™ technology due to the advancement of computer viruses.

   Everyday, there are new BIOS-type viruses discovered that will destroy your system BIOS. Most commercial products on the market do not have solutions to guard against this type of virus intrusion. The DualBIOS™ technology will provide a state-of-the-art solution to protect your PC:

Case I.) Vicious computer viruses may wipe out your entire system BIOS. With a conventional single system BIOS PC, the PC will not be functional until it is sent for repairs.

Case II.) If the "Auto Recovery" option is enabled in the DualBIOS™ utility, and if a virus corrupts your system BIOS, the backup BIOS will automatically reboot the system and correct the main BIOS.

Case III.) A user may override booting from the main system BIOS. The DualBIOS™ utility may be entered to manually change the boot sequence to boot from the backup BIOS.

2. During or after a BIOS upgrade, if DualBIOS™ detects that the main BIOS is corrupt, the backup BIOS will take over the boot-up process automatically. Moreover, it will verify the main and backup BIOS checksums when booting-up. DualBIOS™ technology examines the checksum of the main and backup BIOS while the system is powered on to guarantee your BIOS operates properly.
3. Power Users will have the advantage of having two BIOS versions on their mainboard. The benefit is being able to select either version BIOS to suit the performance system needs.
4. Flexibility for high-end desktop PCs and workstation/servers. In the DualBIOS™ utility, the option can be set, "Halt On When BIOS Defects," to be enabled to halt your system with awarning message that the main BIOS has been corrupted. Most workstation/servers require constant operation to guarantee services have not been interrupted. In this situation, the "Halt On When BIOS Defects" message may be disabled to avoid system pauses during normal booting. Another advantage you gain from Giga-Byte's DualBIOS™ technology is the ability to upgrade from dual 2 Mbit BIOS to dual 4 Mbit BIOS in the future if extra BIOS storage is need.

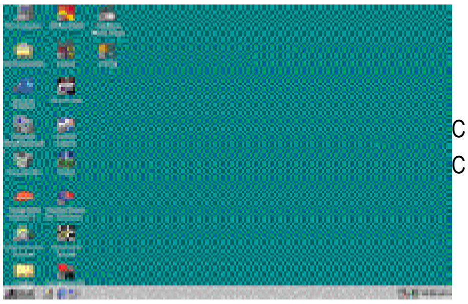
SPDIF Introduction (For GA-7VRXP Only)

SPDIF Introduction

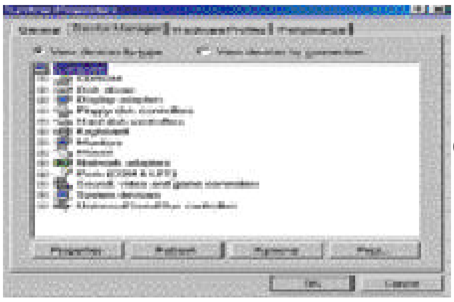
A. What is SPDIF?

The SPDIF output is capable of providing digital signal to AC3 decoder which can support upto 5.1 speakers.

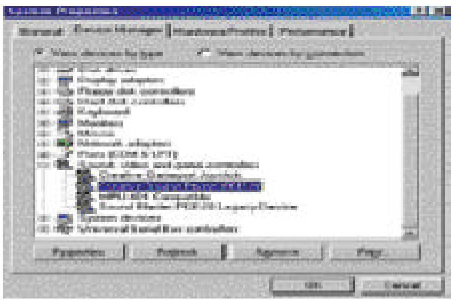
B. How to use SPDIF?



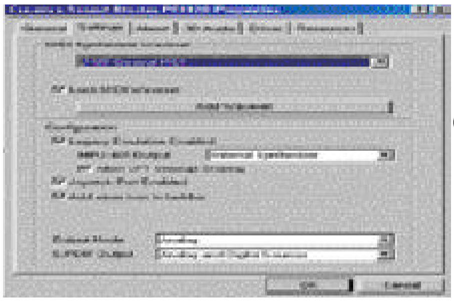
Click your mouse right button in "My Computer" and select the "Properties" item.



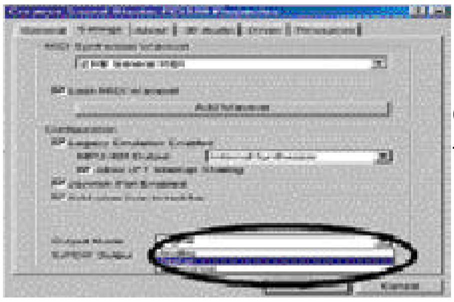
Click "Device Manager" item.



Click "Sound, vidio and game controllers" item and select the "Creative Sound Blaster PCI128" item.



Click "Settings" item and select the "Output Mode" item.



Click "Digital" item, Line Out will be reconfigure to SPDIF Out.

Recommend you to select "Autosense", It will automatically detect the type (mono or stereo) of the audio connector that you plug into Line Out audio jack, then configure Line Out to either SPDIF or Speaker accordingly.

@ BIOS Introduction

Gigabyte announces @ BIOS
Windows BIOS live update utility

Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it.

Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much. First, download different BIOS from website and then switch the operating system to DOS mode. Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare.

Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOS—the first Windows BIOS live update utility. This is a smart BIOS update software. It could help you to download the BIOS from internetand update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOS', BIOS updating is no more than a click.

Besides, no matter which mainboard you are using, if it's a Gigabyte's product*, @BIOS help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly. It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices; you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first. You make a wise choice to use Gigabyte, and @BIOS update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in mainboard industries.

For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOS.

Easy TuneIII™ Introduction

Gigabyte announces *EasyTune*III Windows overdrive utility

"Overdrive" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no". Because "overdrive" is thought to be very difficult and includes a lot of technical know-how, sometimes "overdrive" is even considered as special skills found only in some enthusiasts.

But as to the experts in "overdrive", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware and software tools to do "overdrive". And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "overdrive" system is unknown.

Now everything is different because of a Windows overdrive utility EasyTuneIII—announced by Gigabyte. This utility has totally changed the gaming rule of "overdrive". This is the first overdrive utility suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" to run "overdrive" at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have auto and immediate CPU overclocking. This software will then overdrive CPU speed automatically with the result being shown in the control panel. If someone prefers to "overdrive" by oneself, there is also another choice. Click "Advanced Mode" to enjoy "sport drive" class overclocking. In "Advanced Mode", one can change the system bus speed in small increments to get ultimate system performance. And no matter which mainboard is used, if it's a Gigabyte's product*, EasyTuneIII helps to perform the best of system.

Besides, different from other traditional over-clocking methods, EasyTuneIII doesn't require users to change neither BIOS nor hardware switch/ jumper setting; on the other hand, they can do "overdrive" at only one click. Therefore, this is a safer way for "overdrive" as nothing is changed on software or hardware. If user runs EasyTuneIII over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-performed system speed been tested in EasyTuneIII, user can "Save" this bus speed and "Load" it in next time. Obviously, Gigabyte EasyTuneIII has already turned the "overdrive" technology toward to a newer generation.

This wonderful software is now free bundled in Gigabyte motherboard attached driver CD. Users may make a test drive of "EasyTuneIII" to find out more amazing features by themselves.

RAID Introduction

What is RAID?

This motherboard implements two different types of RAID levels as follows:

RAID 0 (stripe)

For capacity -- The motherboard array will be as big as the smallest HDD in the array times however many HDDs are in the array. Any larger HDDs will simply be truncated. The truncated space on the bigger HDDs will then be unusable.

For sustained data transfers -- A RAID 0 array consisting of two HDDs will transfer at about twice the speed of the slowest HDD in the array. A RAID 0 array consisting of four HDDs will transfer at about three times the speed of the slowest HDD in the array.

RAID 1 (mirror)

For capacity - This Motherboard array will be as big as the smallest HDD in the array. The larger HDD will simply be truncated. The truncated space on the bigger HDD will then be unusable.

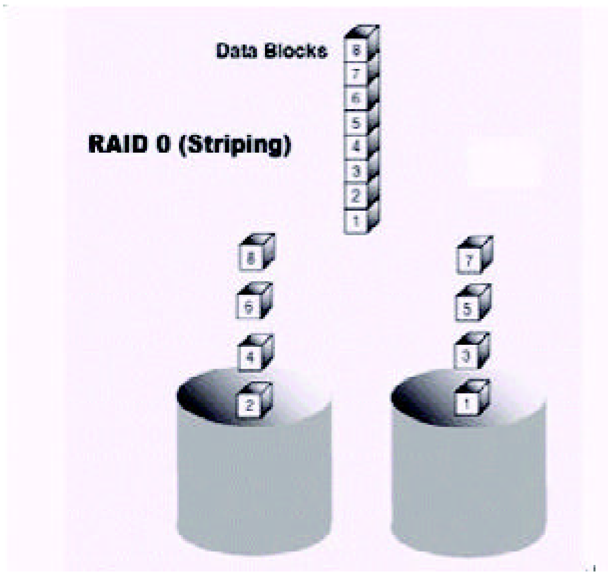
For sustained data transfers -- This motherboard array will write data at the rate of the slowest HDD in the array. This motherboard array will read data at twice the rate of the slowest HDD in the array.

About RAID Levels

Striping (RAID 0)

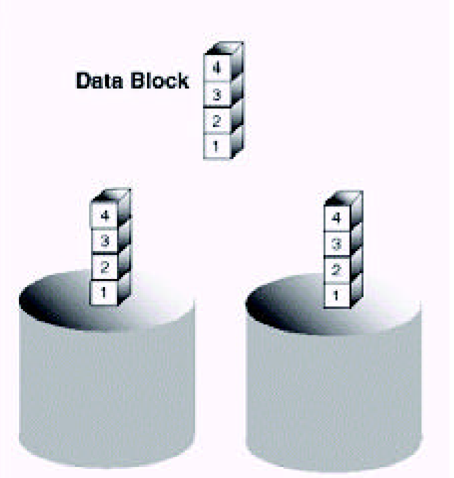
Reads and writes sectors of data interleaved between multiple drives. When any disk member fails, it affects the entire array. Performance is better than a single drive since the workload is balanced between the array members. This array type is for high performance systems. Identical drives are recommended for performance as well as data storage efficiency. The disk array data capacity is equal to the number of drive members times the smallest member capacity. For example, one 1GB and 1 drives will form a 2GB (2 x 1GB) disk array.

Stripe Size - a value can be set from 1KB to 1024KB sector size. The size can directly affect performance. In the FastBuild BIOS, the "Desktop" default is 8KB while "Server" and "A/V Editing" are 64KB.



Mirroring (RAID 1)

Writes duplicate data on to a pair of drives while reads are performed in parallel. ATA RAID 1 is fault tolerant because each drive of a mirrored pair is installed on separate IDE channels. If one of the mirrored drives suffers a mechanical failure (e.g. spindle failure) or does not respond, the remaining drive will continue to function. This is called Fault Tolerance. If one drive has a physical sector error, the mirrored drive will continue to function.



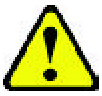
RAID 1 (Mirroring)

On the next reboot, the FastBuild™ utility will display an error in the array and recommend to replace the failed drive. Users may choose to continue using their PC, however Promise recommends replacing the failed drive as soon as possible. See Chapter 4 for a functional description.

Due to redundancy, the drive capacity of the array is half the total drive capacity. For example, two 1GB drives that have a combined capacity of 2GB would have 1GB of usable storage. With drives of different capacities, there may be unused capacity on the larger drive.

Creating Your Disk Array

You will now use the FastBuild BIOS utility to create your array using the attached drives. There are two different scenarios in creating this array. You can create an array for performance, you can create a Security array using new hard drives (recommended).



WARNING: If creating a Security array using an existing hard drive, backup any necessary data. Failure to follow this accepted PC practice could result in data loss.

1. Boot your system. If this is the first time you have booted with RAID, the FastBuild BIOS will display the following screen.

```
FastTrak100 (tm) "Lite" BIOS Version 1.xx (Build xxxx)
(c) 1995-2001 Promise Technology, Inc. All Rights Reserved.
    No array defined . . .
Press <Ctrl-F> to enter FastBuild (tm) Utility
Or press <ESC> key to continue booting the system.
```

2. Press <Ctrl-F> keys to display the FastBuild (tm) Utility Main Menu
3. Press "1" to display the Auto Setup Menu below. This is the fastest and easiest method to creating your first array.

```
        FastBuild (tm) Utility 1.32 (c) 1995-2001 Promise Technology, Inc.
                          [Auto Setup Options Menu]
  Optimize Array for:                  Performance
  Typical Application usage:           DESK TOP
                          [ Auto Setup Configuration ]
  Mode.......................................................Stripe
  Spare Driver...............................................0
  Drives used in Array....................................2
  Array Disk Capacity (Size in MB)..................160107
                                        [ Keys Available ]
[↓] Up [↓] Down [↓ ,↓ , Space] Change Option [ESC] Exit [Ctrl-Y] Save
```

Creating an Array for Performance

NOTE: This motherboard allows users to create striped arrays with 1, 2 drives.

To create an array for best performance, follow these steps:

1. Using the Spacebar, choose "Performance" under the Optimize Array for section.
2. Select how you will use your PC most under the Typical Application usage section The choices are A/V Editing, Server, and Desktop (the default).
3. Press <Ctrl-Y> keys to Save and create the array.
4. Reboot your system.
5. Once the array has been created, you will need to FDISK and format the array as if it were a new single hard drive.
6. Proceed to Installing Drivers section of the manual (see RAID Manual of the IUCD).

Creating a Security Array With New Drives

NOTE: This motherborad permit only two drives to be used for a single Mirrored array in Auto Setup.

To create an array for data protection using new hard drives, follow these steps:

1. Using the Spacebar, choose "Security" under the Optimize Array for section.
2. Press <Ctrl-Y> keys to Save your selection.
3. The window below will appear.

Do you want the disk image to be duplicated to another? (Yes/No) Y - Create and Duplicate N - Create Only

4. Press "N" for the Create Only option.
5. A window will appear almost immediately confirming that your Security array has been created. Press any key to reboot the system

Array has been created. <Press Any Key to Reboot>

6. Proceed with normal FDISK and format procedures as if you had just installed a new hard drive.
7. Once the arrayed drives have been formatted, proceed to the Installing Driver chapter (see RAID Manual of the IUCD) to install your operating system.

Creating a Security Array With An Existing Data Drive

NOTE: This motherboard permits only two drives to be used for a single Mirrored array in Auto Setup.

You would use this method if you wish to use a drive that already contains data and/or is the bootable system drive in your system. You will need another drive of identical or larger storage capacity.

WARNING: Backup any necessary data before proceeding. Failure to follow this accepted PC practice could result in data loss.

WARNING: If you wish to include your current bootable drive using the Windows NT 4.x or Windows 2000 operating system as part of a bootable Mirrored (RAID 1) array on your system, do NOT connect the hard drive to the motherboard controller yet. You MUST install the Windows NT4 or 2000 driver software first (see RAID Manual of the IUCD) to this drive while it is still attached to your existing hard drive controller. For all other Operating Systems, proceed here.

Follow these steps:

1. Using the Spacebar, choose "Security" under the Optimize Array for section.
2. Press <Ctrl-Y> keys to Save your selection. The window below will appear.

```
Do you want the disk image to be duplicated to another? (Yes/No)
Y - Create and Duplicate
N - Create Only
```

3. Press "Y" for the Create and Duplicate option. The window below will appear asking you to select the Source drive to use. FastBuild will copy all data from the Source drive to the Target drive.

```
                         Source Disk
Channel:ID          Drive Model              Capacity (MB)
                         Target Disk
Channel:ID          Drive Model              Capacity (MB)
                    [Please Select A Source Disk]
Channel:ID          Drive Model              Capacity (MB)
1 :Master    QUANTUMCR8.4A           8063
2 :Master    QUANTUMCR8.4A           8063
                    [↑] Up [↓]DOWN   [ESC] Exit   [Enter] Select
```

4. Use the arrow keys to choose which drive contains the existing data to be copied.
5. Press [Enter] keys to selection and start duplication. The following progress screen will appear.

Start to duplicate the image . . . Do you want to continue? (Yes/No) Y - Continue N - Abort

6. Select "Y" to continue. If you choose "N" , you will be returned to step 1.
7. Once complete, the following screen will appear confirming that your Security array has been created. Press any key to reboot the system

Array has been created. <Press Any Key to Reboot>

8. Proceed to the Installing Driver chapter (see RAID Manual of the IUCD) to install the RAID driver and/or operating system.

Using FastBuild™ Configuration Utility

The FastBuild™ Configuration Utility offers several menu choices to create and manage the drive array on the motherboard. For purposes of this manual, it is assumed you have already created an array in the previous chapter and now wish to make a change to the array or view other options.

Viewing BIOS Screen

When you boot your system with the RAID function and drives installed, the FastBuild BIOS will detect the drives attached and show the following screen.

```
FastTrak100 (tm)"Lite" BIOS Version 1.xx (Build xx)
(c) 1995-2001 Promise Technology, Inc. All Rights Reserved.
    Scanning IDE drives . . . . .
```

If an array exists already, the BIOS will display the following screen showing the board RAID BIOS version and status of the array.

```
FastTrak100 (tm) "Lite"BIOS Version 1.xx (Build xxxx)
(c) 1995-2001 Promise Technology, Inc. All Rights Reserved.
    ID   MODE SIZE          TRACK-MAPPING        STATUS
    1 *  1*2 Mirror         16126M  611/128/32   Functional
    Press <Ctrl-F> to enter FastBuild (tm) Utility....
```

The array status consists of three possible conditions: Functional, Critical, Offline.

Functional - The array is operational.

Critical - A mirrored array contains a drive that has failed or disconnected. The remaining drive member in the array is functional. However, the array has temporarily lost its ability to provide fault tolerance. The user should identify the failed drive through the FastBuildO Setup utility, and then replace the problem drive.

Offline - A striped array has 1 drive that has failed or been disconnected. When the array condition is "offline," the user must replace the failed drive(s), then restore data from a backup source.

Navigating the FastBuild™ Setup Menu

When using the menus, these are some of the basic navigation tips: Arrow keys highlights through choices; [Space] bar key allows to cycle through options;
[Enter] key selects an option; [ESC] key is used to abort or exit the current menu.

Using the Main Menu

This is the first option screen when entering the FastBuild™ Setup.

```
FastBuild (tm) Utility 1.xx (c) 1995-2000 Promise Technology, Inc.
                 [ Main Menu ]
Auto Setup.........................................[ 1 ]
View Drive Assignments......................[ 2 ]
View Array.........................................[ 3 ]
Delete Array.......................................[ 4 ]
Rebuild Array......................................[ 5 ]
Controller Configuration.........................[ 6 ]
                 [ Keys Available ]
      Press 1...6 to Select Option   [ESC] Exit
```

To create a new array automatically, follow the steps under "Creating Arrays Automatically" on page 80. Promise recommends this option for most users.
To view drives assigned to arrays, see "Viewing Drive Assignments" on page 82.
To delete an array (but not delete the data contained on the array), select "Deleting An Array" on page 84.
To rebuild a mirrored array, see "Rebuilding an Array" on page 86.
To view controller settings, see "Viewing Controller Configuration" on page 88.

NOTE: After configuring an array using FastBuild, you should FDISK and format t he arrayed drive(s) if you are using new, blank drives. Depending on the type of array you are using.

Creating Arrays Automatically

The Auto Setup <1> selection from the Main Menu can intuitively help create your disk array. It will assign all available drives appropriate for the disk array you are creating. After making all selections, use Ctrl-Y to Save selections. FastBuild will automatically build the array.

```
FastBuild (tm) Utility 1.xx (c) 1995-2000 Promise Technology, Inc.
                         [Auto Setup Options Menu]
Optimize Array for:      Performance
Typical Application usage: A/V Editing
                         [ Auto Setup Configuration ]
  Mode..........................................Stripe
  Spare Drive Count..............................0
  Drives used in Array...........................2
  Array Disk Capacity............................16126
                         [ Keys Available ]
[↴] Up [↴] Down [↴ , ↴ , Space] Change Option [ESC] Exit [Ctrl-Y] Save
```

Optimize Array For

Select whether you want Performance (RAID 0), Security (RAID 1) under the "Optimize Array for"setting.

Performance (RAID 0 Striping)

Supports the maximum performance. The storage capacity equals the number of drives times the capacity of the smallest drive in the disk array.

NOTE: This motherboard permits striped arrays using 1, 2 drive attached in Auto Setup mode.

Security (RAID 1 Mirroring)

Creates a mirrored (or fault tolerant) array for data security.

NOTE: Under the Security setting, This motherboard permits two drives to be used for a single Mirrored array only.

Defining Typical Application Usage

Allows the user to choose the type of PC usage that will be performed in order to optimize how This motherboard handles data blocks to enhance performance. Your choice will determine the block size used. You may choose from: A/V Editing (for audio/video applications, or any similar application that requires large file transfers), Server (for numerous small file transfers), or Desktop (a combination of large and small file sizes).

Viewing Drive Assignments

The View Drive Assignments <2> option in the Main Menu displays whether drives are assigned to a disk arrays or are unassigned.

Under the "Assignment" column, drives are labeled with their assigned disk array or shown as "Free" if unassigned. Such "Free" drives can be used for a future array. Unassigned drives are not accessible by the OS. The menu also displays the data transfer mode that relates to speed used by each drive (U5 refers to 100MB/sec transfers, U4 refers to 66MB/sec transfers, etc...)

FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.

[View Drive Assignments]

Channel:ID	Drive Model	Capacity(MB)	Assignment	Mode
1 : Master	QUANTUMCR8.4A	8063	Array 1	U5
1 : Slave	QUANTUMCR8.4A	8063	Free	U5
2 : Master	QUANTUMCR8.4A	8063	Array 1	U5

[Keys Available]

[↴] Up [↴] Down [ESC] Exit Mode (P=PIO, D=DMA, U=UDMA)

How Orders Arrays

During startup, the disk arrays on the motherboard are recognized in this order: 1) The array set to bootable in the FastBuildTM Setup, and 2) the Array number (i.e. Array 0, Array 1¡K). This would be involved in determining which drive letters will be assigned to each disk array.

How Saves Array Information

All disk array data is saved into the reserved sector on each array member. We suggests that users record their disk array information for future reference.

Another feature of the motherboard disk array system is to recognize drive members even if drives are moved between different motherboard connectors(IDE3&IDE4). Since each drive's array data identifies itself to the array, it is possible to move or swap drives without modifying the array setup. This is valuable when adding drives, or during a rebuild.

Deleting An Array

The Delete Array <4> Menu option allows for deletion of disk array assignments. This is not the same as deleting data from the drives themselves. If you delete an array by accident (and before it has been used again), the array can normally be recovered by defining the array identically as the deleted array.

WARNING: Deleting an existing disk array could result in its data loss. Make sure to record all array information including the array type, the disk members, and stripe block size in case you wish to undo a deletion.

FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.

[Delete Array Menu]

Array No	RAID Mode	Total Drv	Capacity(MB)	Status
Array 1	Mirror	2	8063	Functional
Array 2	Stripe	1	8063	Functional
Array 3	Stripe	1	8063	Functional
Array 4	-----	-----	-----	-----

[Keys Available]

[↑] Up [↓] Down [ESC] Exit [Del] Delete

1. To delete an array, highlight the Array you wish to delete and press the [Del] key.
2. The View Array Definition menu will appear (see below) showing which drives are assigned to this array.

FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.

[Define Array Menu]

Array No	RAID Mode	Total Drv	Capacity(MB)	Status
Array 1	Mirror	2	8063	Functional

Stripe Block: 64 KB

[Drive Assignments]

Channel:ID	Drive Model	Capacity (MB)	Assignment
1 : Master	QUANTUMCR8.4A	8063	Y
2 : Master	QUANTUMCR8.4A	8063	Y

3. Confirm yes to the following warning message with the <Ctrl-Y> key to continue array deletion:

Are you sure you want to delete this array? Press Ctrl-Y to Delete, others to Abort

4. After deleting the array, you should create a new array using Auto Setup or the Define Array menu from the FastBuild Main Menu.

Rebuilding A Mirrored Array

The Rebuild Array <5> Menu option is necessary to recover from an error in a mirrored disk array. You will receive an error message when booting your system from the BIOS.

NOTE: Drives MUST be replaced if they contain any physical errors.

Follow these steps BEFORE using the Rebuild Array menu option:

1. On bootup, the system Startup BIOS will display an error message identifying which drive has failed.
2. Press <Ctrl-F> keys to enter FastBuild Main Menu.
3. Select submenu Define Array <3>.
4. Select the failed array and identify the Channel and ID of the failed drive.
5. Power off and physically remove the failed drive.
6. Replace the drive with an identical model.
7. Reboot the system and enter the FastBuild Main Menu.
8. Select the <5> Rebuild Array option. The following screen will appear.

FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.

[Rebuild Array Menu]

Array No	RAID Mode	Total Drv	Capacity(MB)	Status
Array 1	Mirror	2	16126	Critical
Array 2	Stripe	1	8063	Functional
Array 3	Stripe	1	8063	Functional
Array 4	-----	------	------	-------

[Keys Available]

[↑] Up [↓] Down [ESC] Exit [Enter] Select

9. Highlight the array whose Status is "Critical".
10. Press [Enter]. The following screen will then appear (see next page).

FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.
[Rebuild Array Menu]
The Previous recovery is not complete!

<Press Any Key to Restart The Recovery>

11. Press anykey and confirm that the data will be copied on to the selected drive. All data on the replacement drive will be written over with mirrored information from the array drive. A progress bar will appear as below.

Please Wait While Duplicating The Image

10% Complete

12. Once the rebuild process is complete, the user will be asked to reboot the system.

Viewing Controller Settings

The Controller Configuration <6> menu selection allows you to enable or disable the BIOS from halting (the default) if it detects an error on boot up. You may also view the system resources (Interrupt and I/O port address) of data channels

```
            FastBuild (tm) Utility 1.32 (c) 1996-2001 Promise Technology, Inc.
                              [ Adapter Configuration - Options ]
                              Halt On Error:     Enable
                              [ System Resources Configuration ]
Channel 1 (IDE1)              Interrupt : A I/O Port : 9800
Channel 2 (IDE2)              Interrupt : A I/O Port : A000
                              [ Keys Available ]
                  [↑ , ↓ Space] Change Option   [ESC] Exit
```

Halting BIOS On Bootup Errors

The [Adapter Configuration - Options] section allows you to enable or disable The system to Halt operation at the BIOS startup screen should an error be detected. This is the only option that can be changed on this screen.

Viewing System Resources

The [System Resources Configuration] section of this submenu displays the PCI slot interrupt and port address used by the system. The resources used are determined by the Mainboard PCI PnP BIOS for the PCI slot in which the system resides.

In the rare case that there is a resource conflict, refer to the Mainboard BIOS documentation on changes on resources allocated to the system PCI slot.

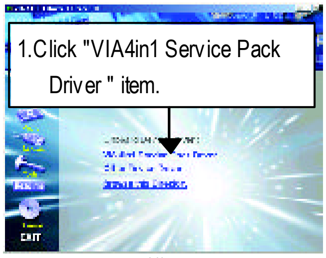
Chapter 5 Appendix

Picture below are shown in Windows ME

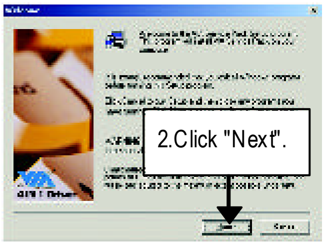
Appendix A: VIA 4 in 1 Service Pack Driver Installation

A. VIA 4 in 1 Service Pack Driver Utility:

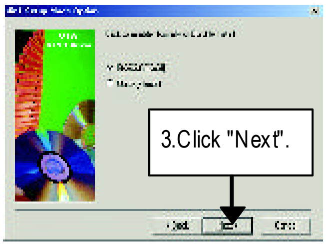
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



(1)



(2)



(3)



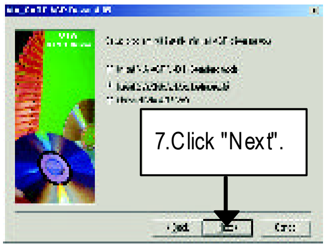
(4)



(5)



(6)



(7)



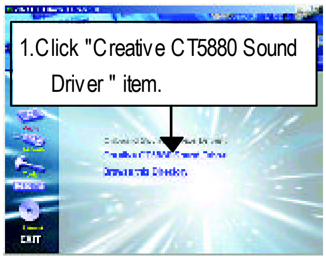
(8)

Appendix B: AC97 Sound Chipset Driver

"AC'97 Audio Driver" under Windows ME will auto install.

Appendix C: Creative CT5880 Chipset Driver Installation (Only for GA-7VRXP)

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



(1)



(2)



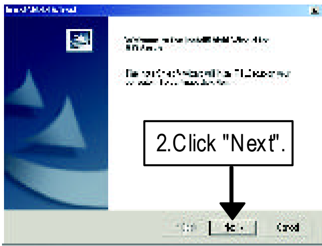
(3)

Appendix D: RealTek 8139/8100 Network Driver (Only for GA-7VRXP)

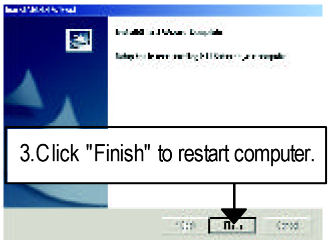
"RealTek 8139/8100 Network Driver" under Windows ME will auto install. If you would like to install LAN driver, please refer to attached README.txt file for detail instruction. Please install the driver through CD-ROM by the path D:\Network\Rtl (This manual assumes that your CD-ROM device drive letter is D:).



(1)



(2)



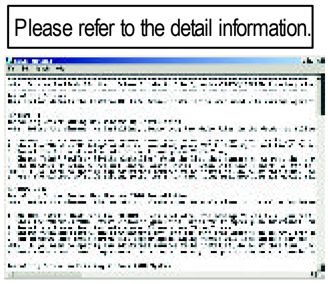
(3)

Appendix E: Other Device Driver

E-1:Promise RAID Driver Information



(1)



(2)

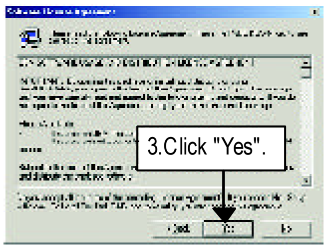
E-2:FastTrak Utilities Information



(3)



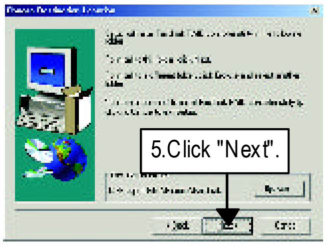
(4)



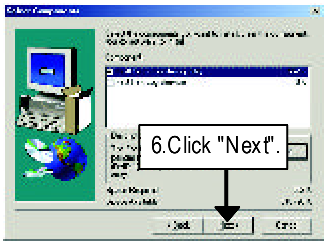
(5)



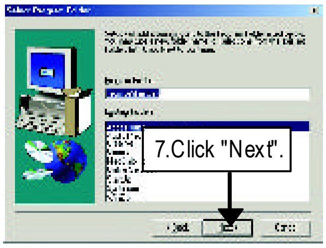
(6)


5.Click "Next".

(7)


6.Click "Next".

(8)


7.Click "Next".

(9)


8.Click "Next".

(10)


9.Click "Next".

(11)

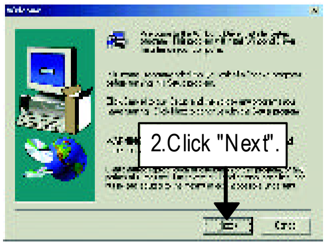

10.Click "Finish" to restart computer.

(12)

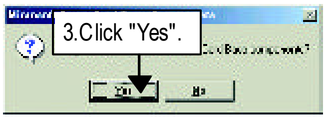
E-3:Winbond MS/SD/SCR Device Driver



(1)



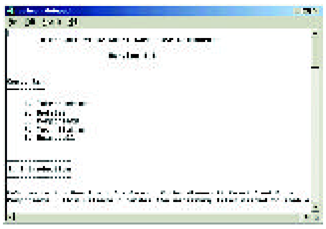
(2)



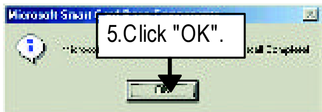
(3)



(4)



(5)



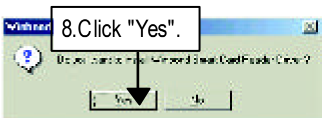
(6)



(7)



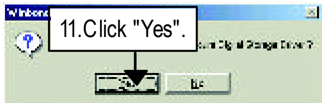
(8)



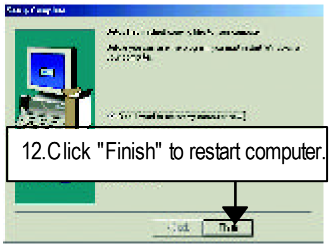
(9)



(10)



(11)



(12)

E-4:Winbond Smart Manager for Smart Card Reader



(1)



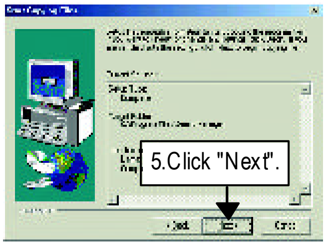
(2)



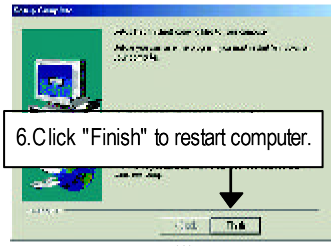
(3)



(4)

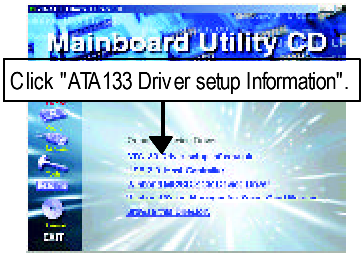


(5)



(6)

E-5:ATA133 Driver setup Information
(This manual assumes that your CD-ROM device drive letter is D:).

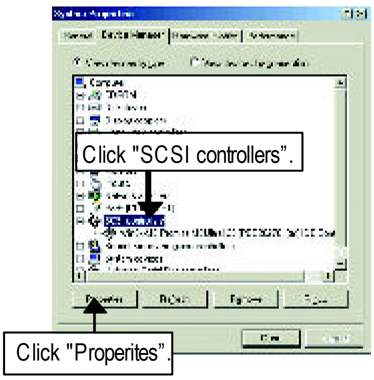


(1)



(2)

If you want to install ATA133 Driver, go to "Control Panel-->System-->Device Manager" and install driver by manually. Please refer to the following precedure:



(3)



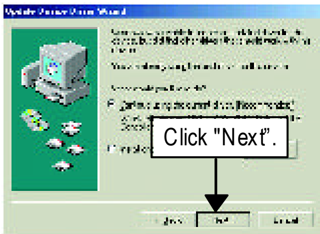
(4)


Please select the path: D:
\Promise\20276\Win9x-Me\

(5)


Click "Next".

(6)


Click "Next".

(7)


Click "Finish".

(8)

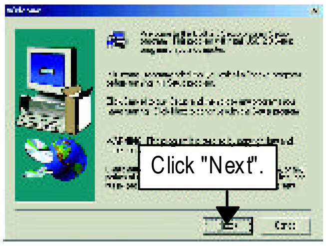

Click "Close". and install OK!

(9)

E-6:USB 2.0 Host controller



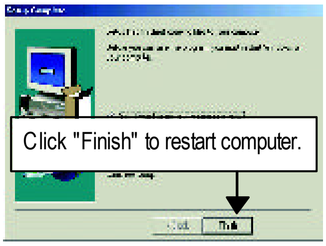
(1)



(2)



(3)



(4)

Appendix F: Face-Wizard Utilities Installation

What is Face-Wizard™?

Face-Wizard™ is a windows based utility with user-friendly interface that allows users to change the boot-up logo with picture from Gigabyte Logo Gallery on web site or other compatible picture you have.

How does it work?

Face-Wizard™ allows user to select BIOS on board or file in hard drive, floppy disk , zip, MO or other storage devices and combine the compatible picture you prefer into BIOS. And not only this, Face-Wizard™ also helps user to update BIOS in windows mode.

What's benefit for using Face-Wizard™?

It can personalize boot-up logo to show your unique style from others, and never again looking at the black and white boot up screen.



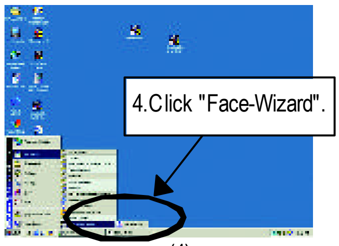
(1)



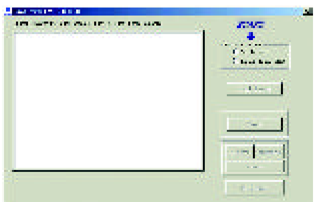
(2)



(3)



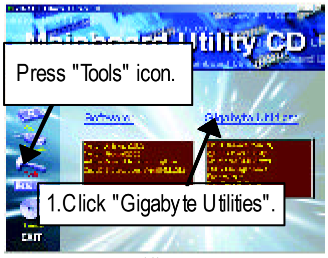
(4)



(5)

Appendix G: EasyTuneIII Utilities Installation

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



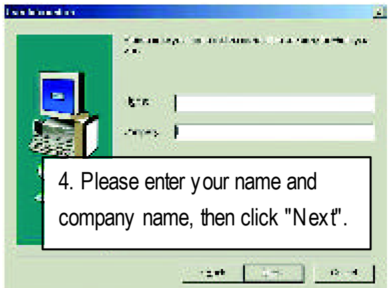
(1)



(2)



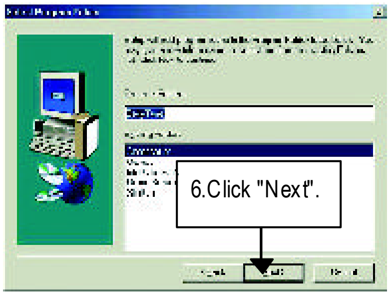
(3)



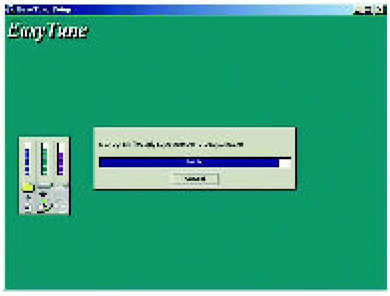
(4)


5.Click "Next".

(5)


6.Click "Next".

(6)


EasyTune

(7)

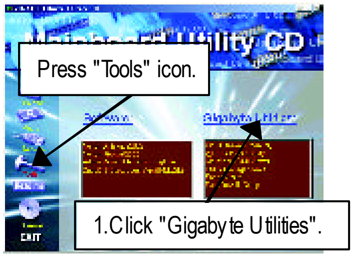

7.Click "Finish" to restart computer.

(8)

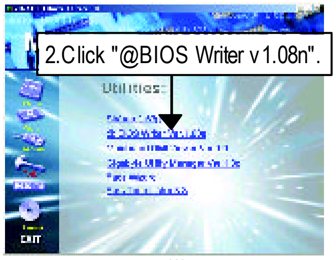
Appendix H: BIOS Flash Procedure

BIOS update procedure:

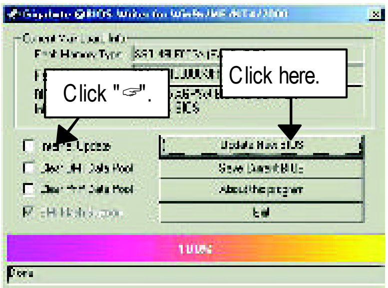
If your OS is Win9X, we recommend that you used Gigabyte @BIOS™ Program to flash BIOS.



(1)



(2)



(3)

Methods and steps:

I. Update BIOS through Internet

a. Click "Internet Update" icon

b. Click "Update New BIOS" icon

c. Select @BIOS™ sever ("Gigabyte @BIOS™ sever 1 in Taiwan" and "Gigabyte @BIOS™ sever 2 in Taiwan" are available for now, the others will be completedsoon)

d. Select the exact model name on your motherboard

e. System will automatically download and update the BIOS.

II. Update BIOS NOT through Internet:

a. Do not click "Internet Update" icon
b. Click "Update New BIOS"
c. Please select "All Files" in dialog box while opening the old file.
d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 7VRXP.F1).
e. Complete update process following the instruction.

III. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

Note:

a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.
b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.
c. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.
d. Please note that any interruption during updating will cause system unbooted

We use GA-7VTX motherboard and Flash841 BIOS flash utility as example.

Please flash the BIOS according to the following procedures if you are now under the DOS mode.

Flash BIOS Procedure:

STEP 1:

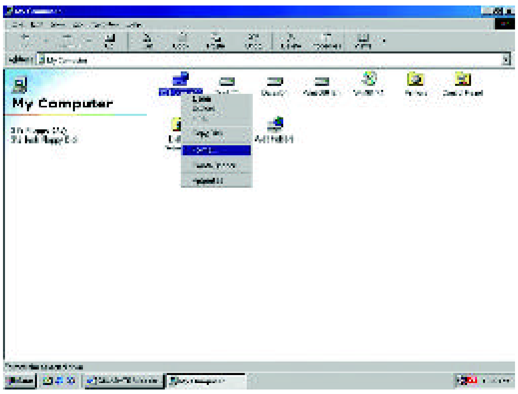
(1) Please make sure you have set "Auto" for BIOS Feature Setup (BIOS Flash Protection). For more detail please refer to page 34.

(2) Please make sure your system has installed the extraction utility such as winzip or pkunzip. Firstly you have to install the extraction utility such as winzip or pkunzip for unzip the files. Both of these utilities are available on many shareware download pages like http://www.shareware.cnet.com

STEP 2: Make a DOS boot diskette. (See example: Windows 98 O.S.)

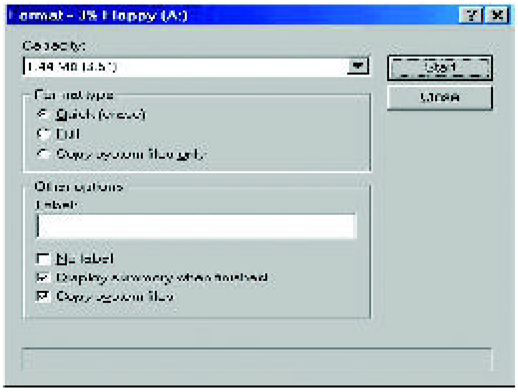
Beware: Windows ME/2000 are not allowed to make a DOS boot diskette.

(1) With an available floppy disk in the floppy drive. Please leave the diskette "UN-write protected" type. Double click the "My Computer" icon from Desktop, then click "3.5 diskette (A)" and right click to select "Format (M)"

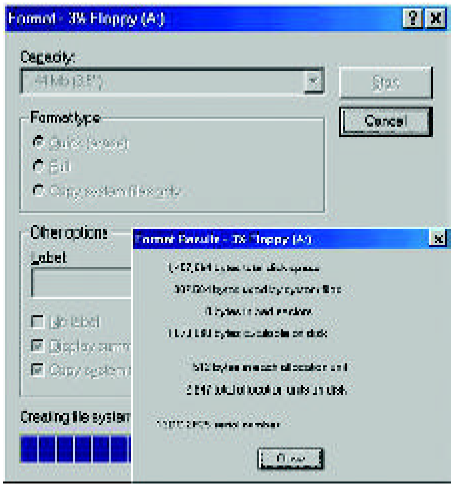


(2) Select the "Quick (erase)" for Format Type, and pick both "Display summary when finished" and "Copy system files", after that press "Start". That will format the floppy and transfer the needed system files to it.

Beware: This procedure will erase all the prior data on that floppy, so please proceed accordingly.



(3) After the floppy has been formatted completely, please press "Close".

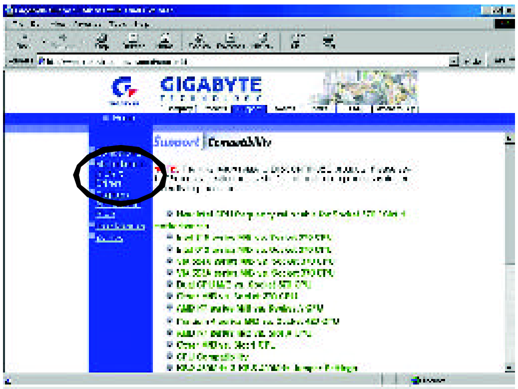


STEP 3: Download BIOS and BIOS utility program.

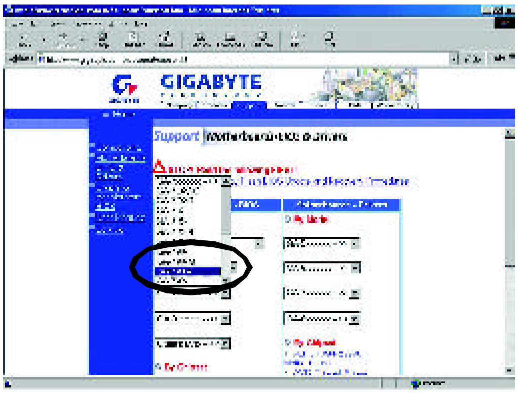
(1) Please go to Gigabyte website http://www.gigabyte.com.tw/index.html, and click "Support".



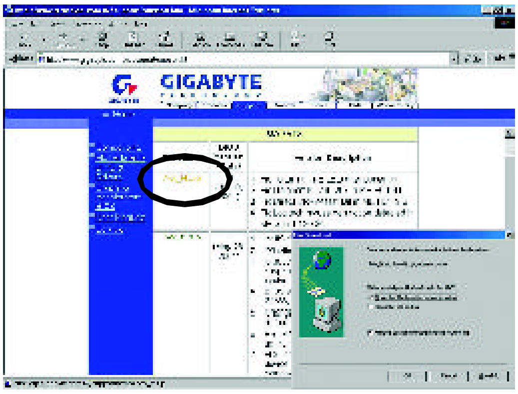
(2) From Support zone, click the "Motherboards BIOS & Drivers".



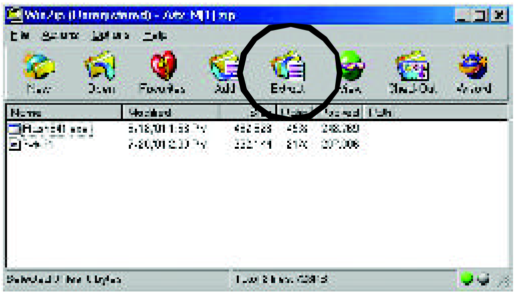
(3) We use GA-7VTX motherboard as example. Please select GA-7VTX by Model or Chipset optional menu to obtain BIOS flash files.



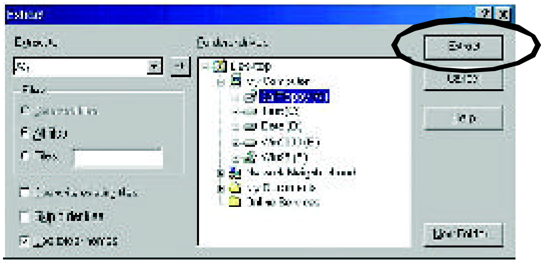
(4) Select an appropriate BIOS version (For example: F4), and click to download the file. It will pop up a file download screen, then select the "Open this file from its current location" and press "OK".



(5) At this time the screen shows the following picture, please click "Extract" button to unzip the files.



(6) Please extract the download files into the clean bootable floppy disk A mentioned in STEP 2, and press "Extract".



STEP 4: Make sure the system will boot from the floppy disk.

(1) Insert the floppy disk (contains bootable program and unzip file) into the floppy drive A. Then, restart the system. The system will boot from the floppy disk. Please press <DEL> key to enter BIOS setup main menu when system is boot up.



(2) Once you enter the BIOS setup utility, the main menu will appear on the screen. Use the arrows to highlight the item "BIOS FEATURES SETUP".

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP / PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values F6: Load BIOS Defaults F7: Load Setup Defaults F10:Save & Exit	
Time, Date , Hard Disk Type…	

(3) Press "Enter" to enter "BIOS FEATURES SETUP" menu. Use the arrows to highlight the item "1st Boot Device", and then use the "Page Up" or "Page Down" keys to select "Floppy".

AMIBIOS SETUP - BIOS FEATURES SETUP

(C) 2001 American Megatrends, Inc. All Rights Reserved

1st Boot Device	: Floppy		
2nd Boot Device	: IDE-0		
3rd Boot Device	: CDROM		
S.M.A.R.T. for Hard Disks	: Disabled		
BootUp Num-Lock	: On	ESC: Quit	↑↓→←: Select Item
Floppy Drive Seek	: Disabled	F1 : Help	PU/PD/+/- : Modify
Password Check	: Setup	F5 : Old Values	(Shift)F2: Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

(4) Press "ESC" to go back to previous screen. Use the arrows to highlight the item "SAVE & EXIT SETUP" then press "Enter". System will ask "SAVE to CMOS and EXIT (Y/N)?" Press "Y" and "Enter" keys to confirm. Now the system will reboot automatically, the new BIOS setting will be taken effect next boot-up.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b

(C) 2001 American Megatrends, Inc. All Rights Reserved

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONF	
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING

Save to CMOS and EXIT (Y/N)? Y

ESC: Quit ↑↓→←: Select Item (Shift)F2 : Change Color F5: Old Values

F6: Load BIOS Defaults F7: Load Setup Defaults F10:Save & Exit

Save Data to CMOS & Exit SETUP

STEP 5: BIOS flashing.

(1) After the system boot from floppy disk, type "A:\> dir/w" and press "Enter" to check the entire files in floppy A. Then type the "BIOS flash utility" and "BIOS file" after A:\>. In this case you have to type "A:\> Flash841 7VTX.F4" and then press "Enter".

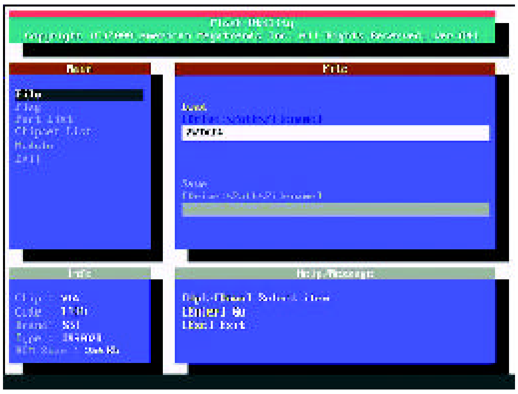
```
Starting Windows 98…

Microsoft(R) Windows98
    © Copyright Microsoft Corp 1981-1999

A:\> dir/w
    Volume in drive A has no label
Volume Serial Number is 16EB-353D
Directory of A:\
COMMAND.COM     7VTX.F4    FLASH841.EXE
              3 file(s)       838,954  bytes
              0 dir(s)        324,608  bytes free

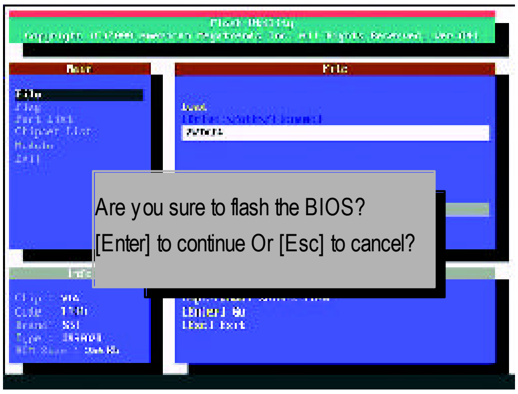
A:\> Flash841 7VTX.F4
```

(2) Now screen appears the following Flash Utility main menu. Press "Enter", the highlighted item will locate on the model name of the right-upper screen. Right after that, press "Enter" to start BIOS Flash Utility.

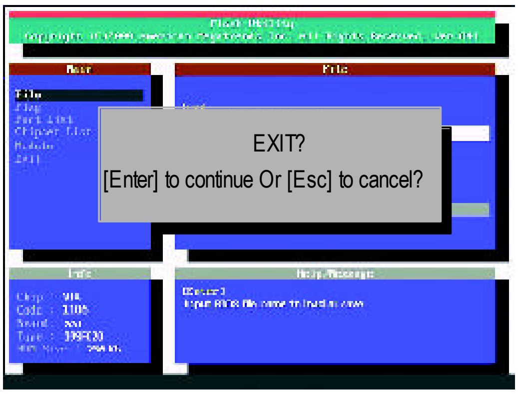


(3) It will pop up a screen and asks "Are you sure to flash the BIOS?" Press [Enter] to continue the procedure, or press [ESC] to quit.

Beware: Please do not turn off the system while you are upgrading BIOS. It will render your BIOS corrupted and system totally inoperative.



(4) The BIOS flash completed. Please press [ESC] to exit Flash Utility.



STEP 6: Load BIOS defaults.

Normally the system redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded. This important step resets everything after the flash.

(1) Take out the floppy diskette from floppy drive, and then restart the system. The boot up screen will indicate your motherboard model and current BIOS version.



(2) Don't forget to press <DEL> key to enter BIOS setup again when system is boot up. Use the arrows to highlight the item "LOAD SETUP DEFAULTS" then press "Enter". System will ask "Load Setup Defaults (Y/N)?" Press "Y" and "Enter" keys to confirm.

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STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONFI	
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING

Load Setup Defaults? (Y/N)?N

ESC: Quit ↑↓→← : Select Item (Shift)F2 : Change Color F5: Old Values

F6: Load BIOS Defaults F7: Load Setup Defaults F10:Save & Exit

Load Setup Defaults

(3) Use the arrows to highlight the item "SAVE & EXIT SETUP" and press "Enter". System will ask "SAVE to CMOS and EXIT (Y/N)?" Press "Y" and "Enter" keys to confirm. Now the system will reboot automatically, the new BIOS setting will be taken effect next boot-up.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.24b

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STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGE	
PNP / PCI CONF	
LOAD BIOS DEFAU	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING

Save to CMOS and EXIT (Y/N)? Y

ESC: Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5: Old Values

F6: Load BIOS Defaults F7: Load Setup Defaults F10:Save & Exit

Save Data to CMOS & Exit SETUP

(4) Congratulate you have accomplished the BIOS flash procedure.

Appendix I: Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Advanced Communications Riser
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
FSB	Front Side Bus
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network

to be continued......

Acronyms	Meaning
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Instrument Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID

Technical Support/RMA Sheet

Customer/Country:	Company:	Phone No.:
Contact Person:	E-mail Add. :	

Model name/Lot Number:	PCB revision:
BIOS version:	O.S./A.S.:

Hardware Configuration	Mfs.	Model name	Size:	Driver/Utility:
CPU				
Memory Brand				
Video Card				
Audio Card				
HDD				
CD-ROM / DVD-ROM				
Modem				
Network				
AMR / CNR				
Keyboard				
Mouse				
Power supply				
Other Device				

Problem Description: